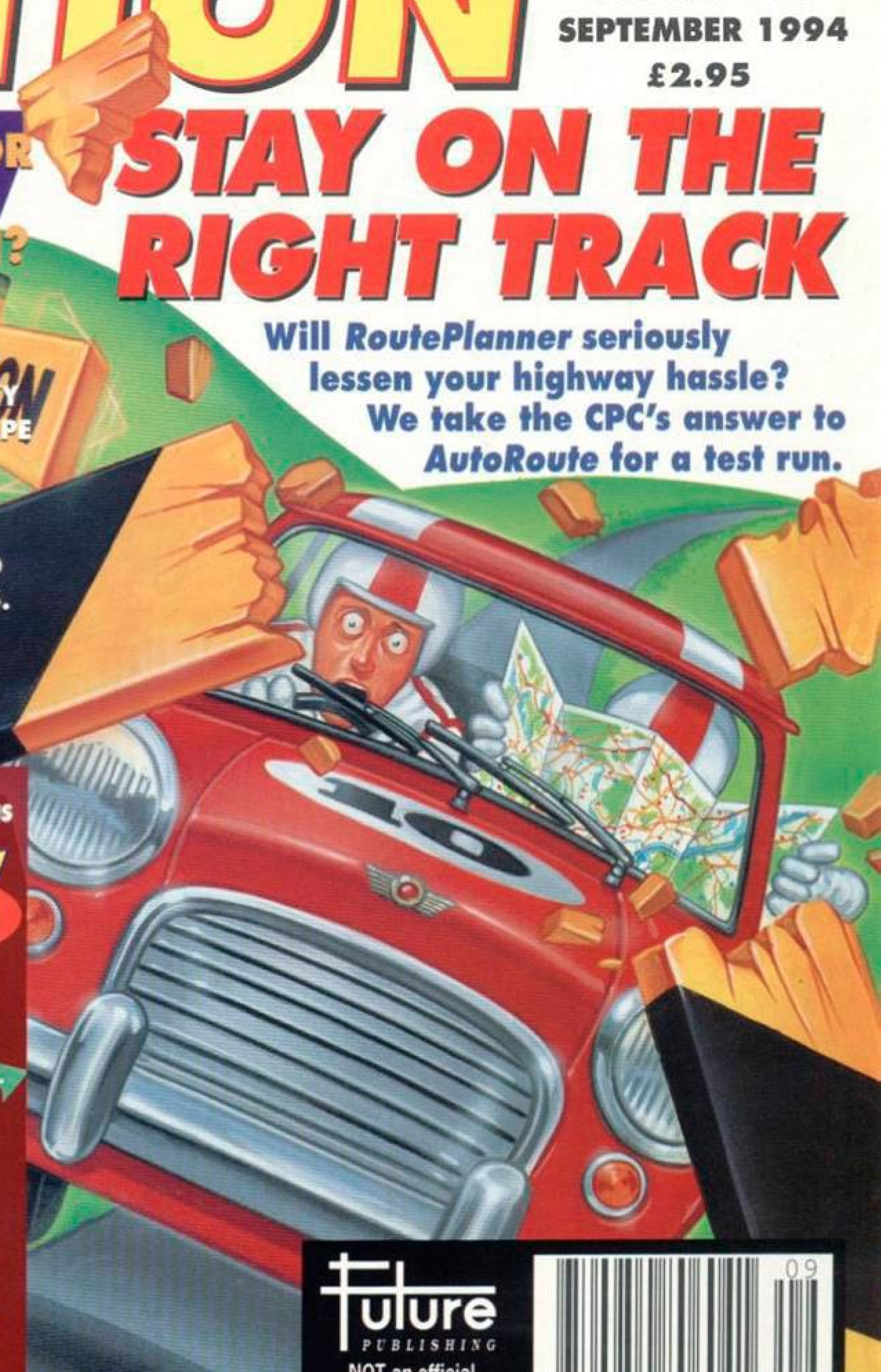
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AMSTRAD ACTION

ISSUE No.108
SEPTEMBER 1994
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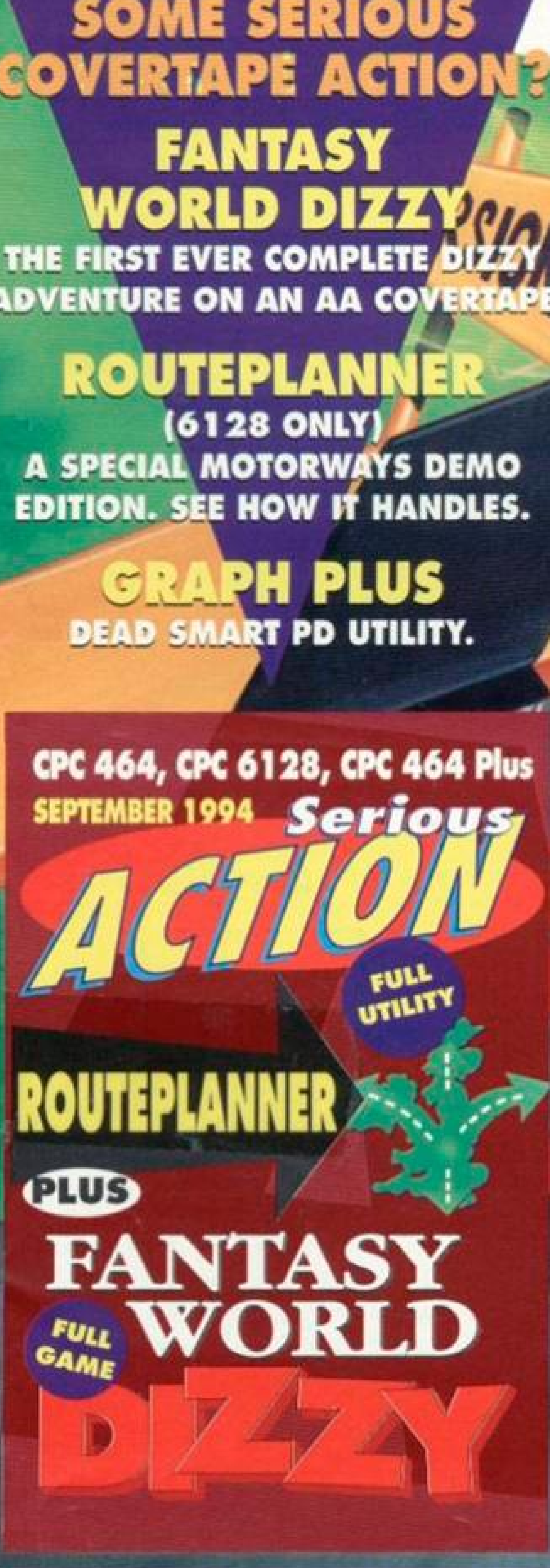
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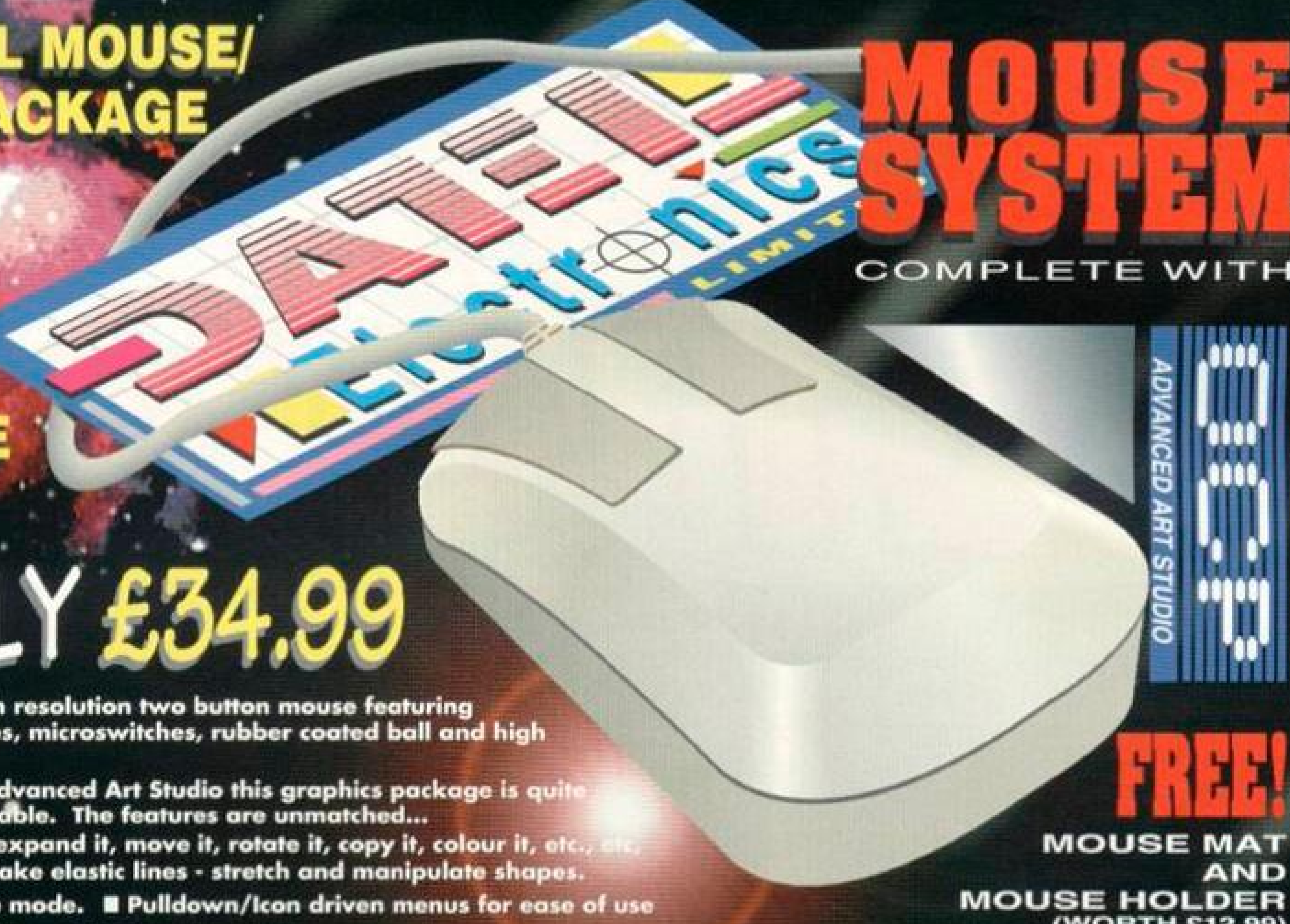
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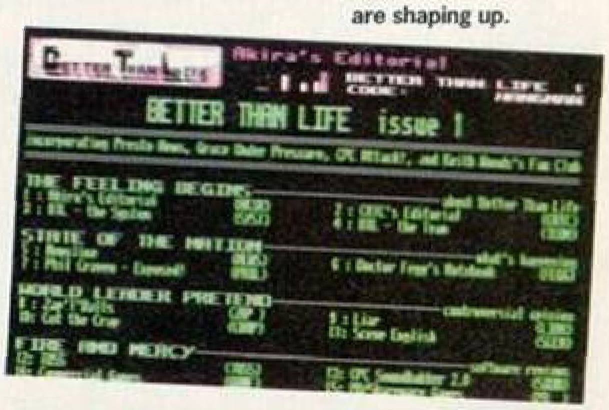
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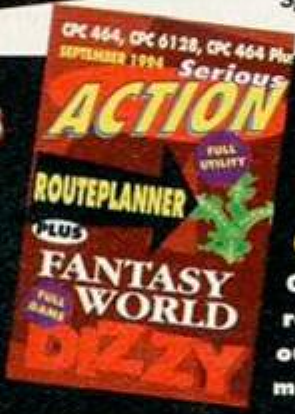
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Line-up



Check out what's on this month's covertape...



Fantasy World Dizzy
The evil wizard Zaks has kidnapped Daisy and Dizzy has to go to the rescue. Okay, the plot's about as original as 4.2 *Children*'s but the game's one of the best Dizzy adventures ever.



Route Planner demo (128k)
Get a feel for the real thing by trying out this special motorways- and trunk roads-only edition of one of the most impressive CPC programs of the year.



Graph Plot
Mathematics progressions plotted the easy way.



Turn now to page 10 for all the tape details

Reaction

Send your letters to: Reaction, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW

Back! Back! Back! BACK!

I had read *AA* for a few years, but last year I stopped. I have now started again as my doubts about magazine quality have been extinguished. *AA* is great! I have one or two questions/suggestions:

1 Can I order disc versions of covertape from ages back or only recent ones?
2 If the answer was yes, do I need to send off separate envelopes for each disc?
3 With all the relevant disc tokens?
4 Another cart round-up, possibly with longer reviews than in *AA89*, would be very gratefully received, at least by me.
5 I don't know how complete your Amscene Directory is, but I find it very useful.

Thank you for a great magazine. I will stick by you now to the bitter end.
RJ Dalton, Salisbury

1 Unfortunately you can only order fairly recent disc versions of the covertape.
2 If the answer had been yes this answer would have been no.
3 Er... yes.
4 We actually had a pretty meaty series of cart reviews from issue 96-100. You can guess what's coming next – why not try our back issues service on page 12...
5 The Directory probably isn't as complete as it could be, but we rely to a large extent on people keeping us informed and up-to-date when it comes to things like fanzines, user groups and PD libraries. So if you know any info that ought to be included in or deleted from the Directory, please get in touch. **Dave**

Mad, bad and not somebody you want to know

I would like to point out a few facts concerning your article on '10 Years Of The CPC464' in *AA104*.

You see, the point I have to make is about your comment that the Spectrum's architecture is like a Skoda.

I would like to bring to your attention the fact that in its time the ZX Sinclair Spectrum was a very powerful, fast machine with an enormous 128k of ROM. At its height it outsold every other home computer around the globe. A few years later Sinclair were bought out by a certain company called Amstrad (you may have heard of them) – a rival, relatively new outfit which had some heavy financial backing.[1]

True, they developed its architecture and styling, but they chose to put a new 3-inch disc drive on it while everybody else at the time used 5.25-inch and 3.5-inch disc drives. This is what effectively killed the Speccy[2] and production was ceased and development of games fizzled out. This left a couple of million Speccy owners gobsmacked and they were forced to buy the rather lacking in processor power CPC464[3].

As for your comments on the Amiga, ST and the Mac, well you're off your head.[4]

And do you really believe the 464 is better than an Amiga, because I think you'll find an Amiga 4000/040 25MHz with a video toaster and a 2.5 gigabyte external SCSI II drive and its tower come in just a little bit longer than a crappy 464, don't you?[5]

Why don't you come off your perch? Stop being so big headed and ignorant and



Know your enemy: No. 3 – the Amiga.

Defining the problem

Congratulations on a very comprehensive and perceptive article on the issues currently involved in the CPC Public Domain scene. As asked for, here is a response from me as a frequent user of software from the UAUG and other libraries and small publishers.

I think the problems raised can be resolved by trying to agree what is PD and what is Homebrew. Both terms are common – we just need to agree what they mean. I understand that programs placed in the public domain are meant for unconditional distribution at no charge with a nominal copying fee allowed. Homebrew means to me that the author reserves rights of limited distribution and may allow or require a fee to be charged for the program itself. Homebrew supported by the author through upgrades or documentation is shareware, but let's leave that for discussion another day.

Once an author decides that these are fair definitions, classifying his or her program to be distributed in the preferred way becomes easier. There is no shame in not being PD, though some seem to suggest it is the only right-on description. There are advantages to each side of the CPC's low cost mixed economy and companies on the way up or down may pass through the homebrew category.

If the price or quality of a library's service is substandard (and the word soon gets around through Amstrad Action and the CPC fanzines) the bad ones will eventually disappear, just as in the commercial world. It may take a while, but that's life. I have been very pleased with the overwhelming majority of programs, demos and clip art from the libraries I have used and their service is generally pretty good, especially as most are part-time enterprises.
Brian Watson, Ely



Strangely, homebrew software seems to be becoming less popular on the CPC, while some very good software is being released as PD. The exact opposite is the case on the C64 where independent developers are flourishing while the PD scene is about as exciting as an in-depth study into potato blight in 19th century Russia. Personally, I think that the term homebrew should be altered to something else like, such as 'indie software'. The word homebrew just sounds so cheap and cheesy, I think it actively puts some people off buying the stuff. **Dave**

Dear AA

Short Sharp Shocks

● What happened to that level of *Fluff* you promised in AA105?
James Pinnion, Spilsby

Technical problems prevented it from being ready in time. We still hope to feature it on a covertape soon. **Dave**



● Spriting Back – I don't know what it is, but it's certainly colourful.
John Jones, Newbiggin-by-the-Sea

We aim to please on a variety of different levels and planes of consciousness. Er, perhaps we ought to invite its illustrious author, Simon 'Hairy' Forrester, back for an in-depth feature on how exactly to use the thing. **Dave**

● Please would you tell me what 'Schneider' is? Is it just a foreign name for the CPC?
Robert Smith, Anglesey

Schneider is indeed the German name for the CPC. It is also known in various parts of the world as Orion, Triumph, AWA, Solavox, Saisho and ISP. **Dave**

● Hi! My name is Chris Spicer, and I'm writing to tell you about my new tape-based fanzine *TECH-MAG*. *TECH-MAG* is programmed using the *GAC*...
Christopher Spicer, Nuneaton

Go north for a game review? This we have got to see. **Dave**

● Can you get Windows for the CPC?
John Adlington, Melksham

Nope, that particular interface system is designed for the PC only. But who needs Windows when we've got DES from Campursoft? **Dave**

● Are you trying to phase out that gorgeous Hairy person?
Karen Beardsley, Ashford.

Nope. We're not trying. We've succeeded (although I bet he'll be back). **Dave**

admit that the 464 and all 8-bit Amstrads (possibly even Amstrad's PCs) are all of a low technology, outdated, poor capability quality (*don't mince your words – Dave*). Basically you're just jealous because everybody else can accept that the Speccy ruled[6] and that reign has now passed on to the new generation of high-end Amigas.[7]

So stop being so sad and admit that the CPC464 was a piece of crap then, and it's not even worth the effort to talk about now.[8]
A proud Commodore Amiga and Speccy owner, Sheffield.
PS I wouldn't touch an Amstrad PC, or any PC for that matter, if you paid me – they're all crap, about as user friendly as my bank manager and as powerful as my little finger.[9]

Right, before I rip this letter apart (with the minimum of effort), let me just apologise to 'Proud' for having to paraphrase a lot of his points – the rant was pretty incoherent in places. He even put his PS before his name. Jeez. I know I shouldn't rise the bait, but there really are so many completely ridiculous claims in the letter, they're just begging to be blasted down. So, get belted in, this is going to be a bumpy ride.

1 Sinclair wasn't just bought out because Amstrad had more financial clout (by the way, Amstrad had been around since the late 60s, making the company at least 10 years older than Clive's lot). Sinclair, basically, had released a series of seriously unpopular products and were ripe for a takeover. So Amstrad took the Spectrum and spent millions on promoting it while virtually ignoring the CPC. So you could actually blame the CPC's lack of development on the fact that Amstrad were trying to flog a dead horse.

2 The C64 had a 5.25-inch disc drive and that computer is sadly no longer with us. So the 3-inch drive argument holds no water, I'm afraid. The Speccy died because it was a terminal case.

3 Hang on, one irrefutable fact is that the CPC had far superior processing power to the Speccy. No argument.

4 The man appears completely bereft of humour, as well.

5 Well, if you're just going to stick on peripherals to prove a point...

6 I'd like to see you prove that boast. I think there are more than a few BBC and C64 fans, as well as devout CPCers, who would disagree with you there.

7 Commodore's recent financial troubles and voluntary liquidation seem to suggest the Amiga isn't quite such an all-conquering computer as you might suggest.

8 Isn't it strange how there's still a CPC mag going strong when all the Speccy mags vanished years ago? The CPC still seems to be worth writing about.

9 Admittedly DOS for PCs might not be friendly, but it's far more logical than the Amiga's stunningly incomprehensible Shell system. And Windows is undeniably easier to use and more flexible than the Amiga's rather utilitarian front-end.

By the way, nice to know you read a magazine devoted to a machine you obviously loathe and that we really managed to get under your skin. **Dave**

Rip Off

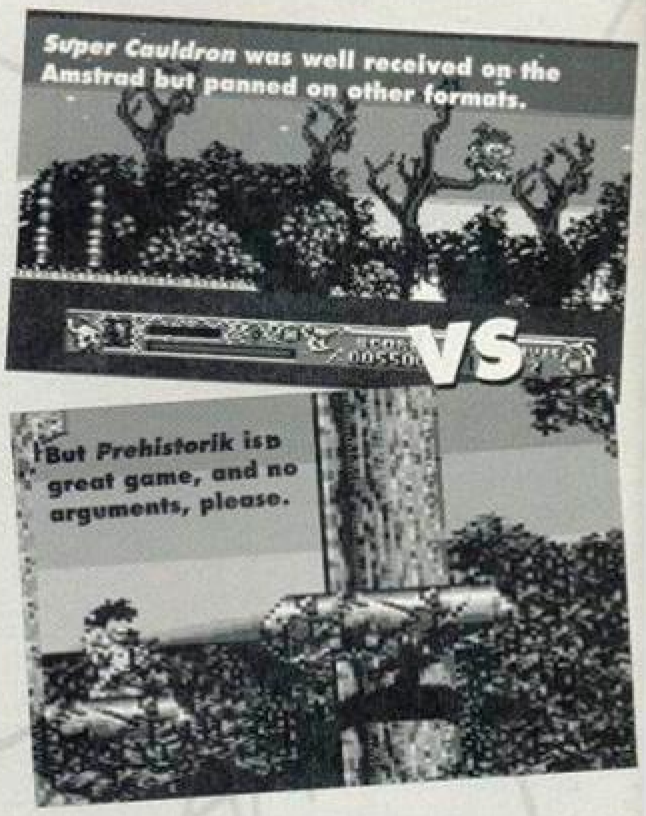
1 Where have all the pages gone? Only 34 pages! Rip off!
2 Where can I get *Lemmings* on disc?
3 Which is the best – *Super Cauldron*, *Prehistorik 2* or *Titus The Fox*?
4 Where can I get a new CPC6128 Plus?
Stephen Rich, Harpenden.

1 Er, well two of them never went away. We've actually got 36 pages, and we're proud of every one of 'em.

2 Your first port of call should be Software Cavern (☎ 0628 891101) which claims to have the largest collection of 8-bit software in the country, and if you get no joy there why not try... wait for it, wait for it... the *AA* Reader Ads service (page 24).

3 *Prehistorik 2* just takes the honours over *Super Cauldron*. *Titus The Fox* was never really in the running – it's no great shakes.

4 Try out The Trading Post (☎ 0952 462135). You never know your luck. **Dave**



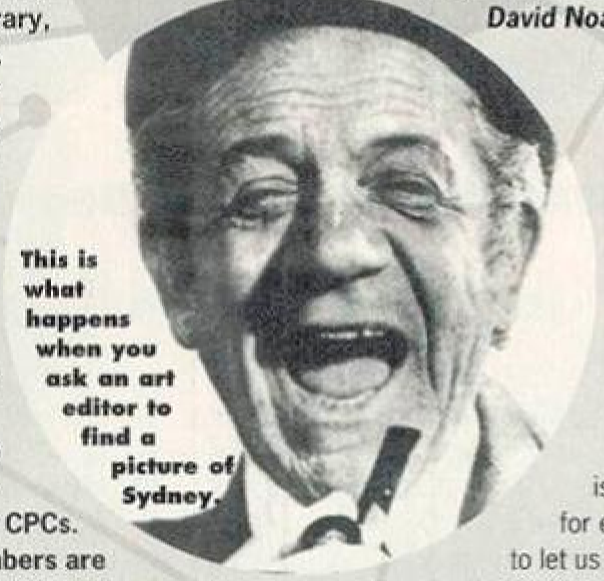
Super Cauldron was well received on the Amstrad but panned on other formats.

But *Prehistorik* is a great game, and no arguments, please.

Swelling in the ranks

I am writing to express our thanks to you for publishing the letter sent to you from the Sydney Amstrad Computer Club. Since then, we have received numerous inquiries from CPCers around Australia and New Zealand. We had no idea until now how many CPC users there are down under.

We have enhanced our membership as many CPCers have taken advantage of our library, advice and good will. Many new members have already started communicating with our club for information on their problems, which we are only too glad to solve. We aim to have free exchange of ideas, hints and tips to help all members get the maximum from their CPCs.



This is what happens when you ask an art editor to find a picture of Sydney.

Some of our members are using PCs at work or at home, and one of our members has stumbled across an emulator program which converts the PC so that most of the games and programs from the CPC can be played on the PCs. It is very satisfying to see the CPC opening screen on a PC.

At our recent meeting we decided to submit programs developed by members for *AA* type-ins or for your covertapes and you may see some coming your way in the near future (*sounds good to me – Dave*).

Once again, thank you very much for the free plug. We appreciate it.

Derek Chaves, The Sydney Amstrad Computer Club, Australia.

Glad to be of service, Del. It's great to hear that the CPC doing so well down under. **Dave**

It's what's inside...

I was initially most upset to be handed a somewhat shrunken version of my favourite mag. First impressions can be a bit misleading, though, and full marks for cramming what remained with good stuff.

The circulation of the mag seems to have slipped a bit of late. There must be a lot of CPC owners who don't buy *AA* on a regular basis (I was one) but how can you attract their attention? Perhaps you should start a suggestion box.

I liked your piece on printers in *AA106*, but how about taking this a bit further with details on print enhancement programs to push our dotty printers to their limits?

And a message to Keith Woods who does Public Image – the freebie *DES* demo prompted me to acquire a copy of the PD *EasyDOS DESK* program from Sheepsoft. Although not so quick as the commercial WIMP system, *DESK* is fairly easy to use and has decent graphics. The accompanying formatter and un-erase programs are very user friendly.

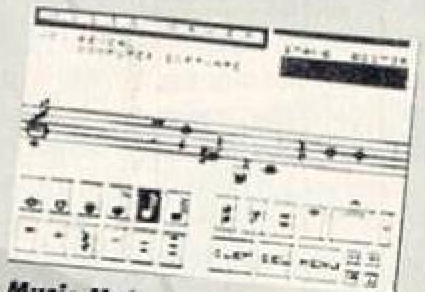
So please continue to review serious public domain programs because we don't all like to play games (well, not all the time). Keep up the good work.

David Noakes, Rochester.

Reaction is a suggestion box of sorts. And yes, despite the fact that we refuse to put Type-Ins back on the covertape (let's not get back into that argument) we do listen to what you lot have to say; that's why The Examiner (page 28) is back up to two pages, for example. So use Reaction to let us know what you think we should be doing in the mag. **Dave**

Music for programmers

If you give a music package to a reviewer who is both a programmer and a musician he will invariably review it from the perspective of a musician trying to create his own melodies. In reply to the review of *Music Maker* in *AA106* I feel I must point out that *MM* was written for programmers, NOT musicians, and is intended to be used to copy existing music – NOT create new tunes. Let me explain...



Music Maker – is it for programmers or musos?

MM is intended for people who enjoy writing programs and who would like to add tunes and sound effects. It is particularly useful for people who have no knowledge of music but would like to take sheet music (from the local library, say) and simply enter it onto the CPC. The instruction manual provides sufficient information to enable anyone (with or without musical knowledge) to produce decent music on the Amstrad.

The emphasis towards programmers is more apparent when you take a look at the driver program which is one of the most powerful and flexible around.

Finally, some info for prospective buyers, *MM* is Plus compatible and is available on 3.5-inch disc or tape only. However, Reveal Software will copy *MM* to 3-inch disc if you send one along with your order.

Mark Payne, Reveal Computer Software, PO Box 1818, Redditch, Worcs, B97 4AZ.

Point taken, Mark. But whatever short-comings you think our review had, you've got to admit that generally we gave *Music Maker* a thumbs up. **Dave**

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Future Publishing Limited, 30 Monmouth Street, Bath, BA1 2BW
Tel: 0225 442244
Fax: 0225 446019

Editor Dave Golder
Art Editor Ollie Alderton
Contributors Richard Fairhurst, Debby Howard, Lee Rouane, David Crookes, Keith Woods and Richard Wildey
Cover Paul Kidby

Ad Sales Executive Robert Bennett
Publisher Jim Douglas
Group publisher Greg Ingham

Production Lisa Read
Lino and Scanning Simon Chittenden, Jon Moore, Chris Stocker, Simon Windsor, Jason Titley, Mark Gover, Brian Hook
Ad Design Cherry Coad
Tel: 0225 442244
Circulation Manager Jon Bickley,
Tel: 0225 442244

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Amscene

What's hot and not what's not on the CPC news front.

State of the scene



AA Editor, Dave Golder – if you see him in the street, be kind.

When you find a program like *RoutePlanner*, you really wonder why more programmers haven't taken advantage of the CPC's capabilities. If someone had said a year ago that an *AutoRoute* for the CPC would be released, most people would have laughed, either a) because they didn't think that it was possible or b) because they thought it was possible, but so downright complicated to program for the CPC that nobody could be bothered.

Well, someone was bothered. Richard has done a great job. The program isn't perfect, but it is still a darned impressive piece of coding. And unlike with games where that is a euphemism for 'worthy but dull', in this case an impressive piece of coding is the best way to describe it.

I hope it sells well. And I hope it encourages other programmers to turn their pet projects into reality. If more stuff like this is produced then people are going to start taking the CPC seriously again. As I said before, it is not a perfect program, but it is an example of the sort of thing that should be coming out for the CPC, rather than yet another disk operating system or back-up utility. It has wider appeal. And it works. And it does something useful. *RoutePlanner* could turn out to be the most important CPC release for a very long time. Let's hope so. Dave

SD re-release 3.5-inch drive

The SD Microsystems 3.5-inch disk drive is back in production.

Steve Denson of SD reckons that the these are the only 3.5-inch drives available with a two-way switch. They provide 800k per disk and also come with heavy duty power supply, utility software and a pack of 3.5-inch disks. All this lot will set you back a mere £79.95 plus £5 for delivery within the UK (contact the company for details of overseas delivery).

SD Microsystems are also planning some new software releases pretty soon, but are keeping things under wraps at the moment. But they are on the look-out for more new serious software, so if you think you've written anything of marketable value get in touch.

The company has also worked out its differences with Ultra (reported last month) and any problems people have had ordering goods from Ultra should be cleared up soon. Denson is now satisfied that it is safe for customers to order SD Microsystems goods from Ultra.

Contact SD Microsystems at PO Box 24, Swaffham, Norfolk PE37 7UE ☎ 0760 720381.

My god, it's full of ads...

8-Bit Mart is a new mail order mag devoted to the 8-bits. And when we say mail order, we don't just mean you have to send away to get it; it's actually stuffed full of adverts for mail order companies and small classified ads. An expanded *AA* reader ads, I suppose.



So if you're after some software or hardware that you just can't get in the shops, *8-Bit Mart* looks like it could be a good place to turn to.

The first ish is out on 1st September. Normally it'd cost you four first class stamps, but as a special offer to *AA* readers, editor Brian Watson is offering you a sample copy for just two first class stamps. That also entitles you to a free small ad in one of the following sections: for sale, wanted, help and miscellaneous.

So if you want to get an issue, or if you want to find out about advertising rates contact Brian Watson, Harrowden, 39 High Street, Sutton-In-The-Isle, Ely CB6 2RA ☎ 0535 777006.

We can work it out

STS is also offering a free service which will modify any disk games that won't work with Plus machines because the keyboard locks off so that they will work with the Plus. Just send along the game on disk along with another disk or tape.

STS Software can be contacted at 298 Holton Road, Barry, South Wales, CF6 6HW.

The greatest (computer) show in the galaxy

This Future Entertainment Show lark is shaping up to be a mammoth of an event, easily eclipsing the last two shows, with much more on offer for everyone who's into any sort of computing.

While there are still going to be loads of new games on show, games workshops and and a game theatre, there's going to be a much bigger emphasis on the serious side of computing. Not business and stuff, but things like CD ROM, DTP, electronic music, digital art, that kind of thing.

And it'll be much more interactive, with loads of workshops, debates and demos which you can take part in. And, of course, all the latest technology and software will be vying for your attention.

Basically, if you're into any aspect of computing there's going be something there for you not just to see, but to get involved in as well.

It all takes place from 26th-30th October at Earl's Court. Tickets cost £6 in advance and £7 on the door. The ticket hotline is ☎ 0369 4235 (and I haven't missed any numbers off that, honest).

Sorry, say Campursoft

Campursoft want to apologise to anyone who has sent off for the DIY ROMbox project. Owing to circumstances beyond their control (such as the good old UK postal system and the author vanishing abroad for a few months) they will not be able to send out the project for three months. But if you don't want to wait that long, contact the company on ☎ 041 554 4735 to cancel your order.

Apologies

We must apologise wholeheartedly to the American company SNK which now holds the copyright for *Ikari Warriors*. Regrettably, we put the game on our covertape last month without their permission. We regret that this happened and will make sure that something like it never happens again.

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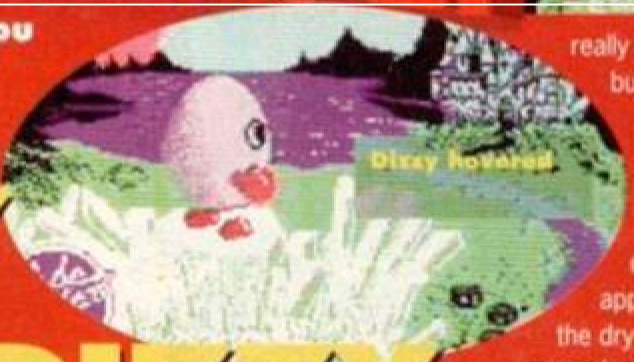




This is what's called hot-footing it out of danger.

Serious ACTION

Wanna know what happens when you load up this month's covertape? Keith Woods is here to tell you.


Dizzy hovered

FANTASY WORLD DIZZY

Opinions are divided on *Dizzy* – some people love him, others think he'd be better fried for their breakfast. If you fall into the latter category, well tough – he's on this month's covertape so you can like it or lump it. And since *Fantasy World Dizzy* is undoubtedly one of the best *Dizzy* adventures, we reckon that if you give it a go, you'll find it pretty easy to like it.

Anyway – to the plot. Trouble's hit the Yolk Folk once more. Daisy's been at it again. Not for the first time, and certainly not for the last, Dizzy's sweetheart has been kidnapped. It hardly seems 15 minutes since Dizzy last risked his shell and saved her. Does she deliberately go looking to be kidnapped for kicks or what?

Any other egg would say stuff her. She's only looking for attention. But no, Dizzy doesn't think like that. He relishes the challenge of bouncing around Fantasy World solving puzzles, so he sets off on yet another adventure.

This one's going to be a little trickier than his previous escapades, though. Dizzy himself somehow has been dragged kicking and screaming to the very depths of the King's Dungeons in the bowels of Fantasy World. So this adventure starts in Dizzy's lonely cell. You'll need to find your way out of there before you can really get going (tip, the troll's feeling peckish, but then trolls always are aren't they?).

Fantasy World Dizzy features over 50 screens. To reach most of them you need to solve a number of puzzles. This is usually done by dropping objects you've collected in appropriate places. For example, dropping the dry ice on the water in in the original Dizzy game (you're getting no help with this one) freezes it over allowing Dizzy to walk across.

When you do manage to find Daisy you have the further challenge of collecting 30 coins. Dizzy's other half isn't satisfied with being rescued, she has to be rich as well. The coins are scattered liberally around Fantasy World, with many hidden behind foliage and fences. Good luck.


These mountains are about to fall on that dragon..


It's the Dizzy family album.

Loading instructions

To load up either side of the tape, simply rewind it, hold down CONTROL and press ENTER. Owners of 6128s or 664s will have to switch their machines to work with tape by typing |TAPE first.

Tape to disk offer

If you've got a disk drive and you want to get a disk version of this month's tape it's easy. Whip out your scissors and cut off that token at bottom of this page, chuck it in an envelope along with your name and address and a cheque or postal order for £2 made out to Ablex Audio Video, then send off the whole kit'n'kaboodle to:

AA108 Disk Offer,
Ablex Audio Video,
Harcourt, Halesfield 14,
Telford, Shropshire TF7 4QD.
☎ 0952 680131

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We make the greatest efforts to ensure our covertapes work properly, but if you've tried all that and your tape's still not loading then pop it in the post (with a note telling us your name, address, type of CPC you use and a description of the problem) to the address above.

NB When returning faulty tapes could you please also include a stamped, self-addressed envelope. Thank you.

Disk 108 Token

DIZZY CONTROLS

Z/Joy left	Left
X/Joy right	Right
Space/Joy up	Jump
Return/Joy fire	Pick up/Drop/Use
Q	Quit

Use Z,X or K,M or a Joystick to select an object in the inventory (the list of what's being carried).

RoutePlanner (128k only)

RoutePlanner is a clever little program by AA's technical guru, Richard Fairhurst, which allows you to plan journeys throughout Britain. All you have to do is tell it where you want to go and where you're travelling from, and it'll suggest what should be the fastest possible road route, taking into account such things as the fact that motorways are faster than other roads and some roads are busier than others.

Once its worked out the route it thinks you should follow, RoutePlanner displays that route on screen and prints out an itinerary. Pretty handy if you've a long journey to make and want to cut out most of the hassle.

This demo is intended to give you an idea of how the full program works, and only includes motorways and major trunk roads. But if you're impressed, reroute to page 18 to read our review of the full package. Oh yeah, and that's where instruction on how to use the covertape demo are too.


Looks like my eyes in the morning.

Graph Plot

Right, 64k CPC owners, just in case you were feeling left out we've included this smart PD utility that you can run quite happily on your machines. It's a mathematical equation plotter which copes with pretty much any equation, can plot three equations at once and includes a zoom facility and a printer dump facility. It's menu-driven and pretty much self-explanatory.


Plotting Dave's downfall

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AA105: Covertape: *Deliverance*, *Bomber*, *Basic Utilities*. Inside: A complete guide to getting your CPC to communicate with other computers, *Megablasters* preview.
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Basically basic

L

Things change. It's a universal law. Nothing ever remains the same (except, perhaps, the plots on the Bill). And so, the Hairy one hands over the Basic tutorial to Rob Buckley and Angela Cooke...

This month, we're going to try our hand at one of the oldest, but most effective, tricks in the programmers back pocket, pPalette switching. This is a method of changing an area from one colour to another, extremely quickly. Try this:

```
10 INK 0,INT(RND*27)
20 FOR F=0 TO 500:NEXT F:GOTO 10
```

Line 10 tells the computer to select an INK from a random number available. Line 20 makes the act of line 10 stall for about a second, then GOTO it again. The amount of time can be changed by altering the 500 up or down.

When RUN, this program appears to be pasting a new colour on top of the old one. But what's actually happening? The monitor is displaying one colour rather than another. Imagine a wall. Instead of putting new coats of paint on, the old paint just changes colour (if only Dulux could do that).



Colour cycling is another similar effect. This can be achieved by putting bands of colour together, then, quickly alternating them. Type this listing;

```
10 MODE 1:FOR Y=0 TO 400 STEP 2
20 PLOT 0,Y,A MOD 3:DRAWR 640,0
30 A=A+0.3
40 NEXT Y
50 PEN 3:LOCATE 11,12:PRINT CHR$(22);CHR$(1);
60 PRINT "...COLOUR CYCLING!..."
70 INK 0,6:INK 1,15:INK 2,24:CALL &BD19
80 INK 0,24:INK 1,6:INK 2,15:CALL &BD19
90 INK 0,15:INK 1,24:INK 2,6:CALL &BD19
100 GOTO 70
```

Line-by-line analysis:

Line 10

First, you set the screen MODE (see box out below). Next create a FOR loop, which has the variable Y (see *AA*104). This loop is done to allow us to plot on every line going up the screen.

Line 20

This lines tells the computer to PLOT a point on the screen (there are more details on plotting in back *AA*102), at Y pixels up in INK colour A. MOD 3 makes sure that when variable A reaches the value 3, it returns to 0. In other words, the variable has a maximum number of 2. And so, the program DRAWs a horizontal line, 640 pixels across the screen.

Line 30

This line tells the computer to increase the value of A by 0.3 each time. Try experimenting with the value of A to produce different sized lines. Go on, you know you want to.

Line 40

This keeps doing the loop until Y=400.

Line 50

This sets up the print for line 60. PEN changes the writing colour. LOCATE positions the first character of the text. The CHR$ bit, sets up Transparent Mode. With this line, the screen seems to be flashing BEHIND the writing. By taking this out, the screen flashes IN FRONT of the writing, making it look worse than it already does.

Line 60

Prints the defined text.

Lines 70, 80 and 90

These have a common aim. They decide the INK values. For example, INK 0 starts at 6, then 24, then 15 (*or red, orange and yellow in plain English – Dave*). `CALL &BD19` is a programming method of slowing and regulating the program to give a steady display. Take this command out of these three lines, and see the muddled difference.

Line 100

This takes the program back to the beginning of the cycle (ie, 70).

Pretty good huh? This simple effect is used in hundreds of games. It can change a dull game, into a bright one.

Try changing line 20 to:

```
20 PLOT 0,Y,A MOD 3:FOR G=1 TO 5:DRAWR 64,64:DRAWR 64,-64:NEXT G
```

This is a FOR LOOP. It is the G value that makes the zig-zag line.

EDIT line 10 so that you change the MODE number (to either 2 or 0), then run the program and see what it difference that makes. The colour changes, because of the amount of colours able to be displayed on screen at any one time (see box out). AA

MODE Muddle...

How many BASIC programmers does it take to change a light bulb? Syntax Error.

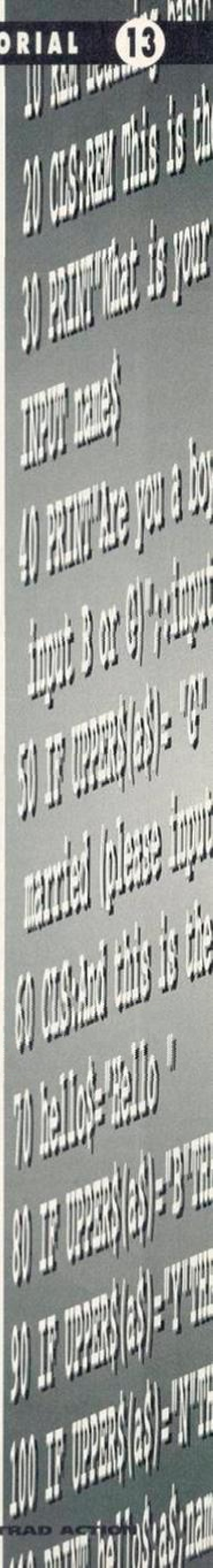
Okay, so it was a bad joke (*it sure was – Dave*). But it does put across a point. The CPC has three different modes – 0, 1, and 2. Try typing in MODE plus one of these numbers, and see what happens.

- **MODE 1 is standard. It can cope with up to four colours on screen at once.**
- **MODE 0 has chunkier pixels. It can have up to 16 colours on screen at once, but the resolution, frankly, is not much cop.**
- **MODE 2 is 80 column. This gives you great resolution, but can only cope with two colours. Ah well, that's the price you pay...**

A PIXEL is one dot on the screen. Pixel resolution (how many dots the screen is made up of) basically defines how sharp your images are.

Next Month

Next we will be looking at the SYMBOL command and altering character sets. Then, we will be pulling all these together into one large effect, known in polite circles as 'a game'.



Techie forum

The Romans might have had a forum. But they never had Richard Fairhurst to answer their techy queries. It's just as well they hadn't invented CPCs back then, really...

Old CPC network

1 Do you know if it's possible to network two 6128s?
2 If it is, then how do you do it?
3 What software will I need to do this?
4 Can you share a printer (DMP 2000) between two 6128s? How?
5 Is there a decent all-round music creator available for the 6128? I used to have one with drums, piano, guitar, etc.
6 I need some more memory for one of my 6128s. I was thinking about getting the Datel Electronics 64k pack, and was wondering if I could use it on a 6128?
7 Could I use a PC modem on my 6128?
8 If so, could I communicate with a PC over the modem? Also could I gain access to Kixx or the Internet?
9 What software will I need to do this?
10 Can you put *Superbasic* (Type-Ins, *AA*51) on a covertape?
Gareth Hughes, Guildford

1 No. Well, it's possible – way back in the distant past we printed a hardware project to link two CPCs – but there's nothing you can do with the finished connection except play *Power Tetris*.
2 See question 3.
3 See question 1 (this seems to be developing into some kind of loop).
4 Yes. Switch off both 6128s, connect the printer to the computer of your choice, and switch them on again. Alternatively, look through a PC magazine to find a nice, expensive Centronics printer-sharing box.
5 Have a look at Reveal's *Music Maker* (reviewed very favourably in *AA*106) or Robot PD's new *ChaRleyTraCker* (previewed this issue on page 34), an absolutely superb package which I've just finished writing (whoops, I think that was a bit of a giveaway).
6 Sorry, you can't. The 64k provided is fixed to act as the extra 64k which, with a 6128, you already have but which 464 owners don't. However, take a look through the Small Ads (page 24) to see if you can find a 256k memory expansion or silicon disc.
7 Yes.
8 You can communicate with any other computer using a modem (as long as the other computer is connected to a modem as well, of course). As for Kixx, that's US Gold's budget label. I think you what you really mean is CIX, which you can sign up with once you have the appropriate equipment – their modem number is ☎ 081 390 1255. A CIX account will give you affordable Internet access as well.
9 The comms software might come built into the serial interface that you buy, or you may need (or want) to order some public domain programs, such as the powerful and user-friendly *BBS Terminal*. Ask your favourite PD library about obtaining a copy.
10 Certainly not. Type it in yourself, you lazy so-and-so. **Richard**

Private Eye

I am trying to learn machine code, so that I can write fast games, and I have a few questions.
1 Does the Firmware Guide (not the original Amsoft one, the other one) contain information about all the firmware calls, including entry and exit conditions? Where can I get it from, and how much is it? Do I need it for programming?
2 At the moment, I can confidently write platform games in BASIC, using machine code routines for things like sprites, but


How does the CPC know that *Dizzy* is on a platform?

CPC Format

Back in *AA*105 The Hairy One said that you can actually fit 205k on a disc, using 10 sectors per track and 41 tracks. Can you print a formatting routine for this type of format?
Andrei Azzopardi, Malta

Here's an assembly language routine which'll do the job for you – type it into *Maxam* (or something similar), assemble it, run it with a blank disc in the drive and Bob's your uncle (whatever that means).

```
          org &8000
          ld de,(&BE42): ld hl,xpb        ;Set up XPB
          ld bc,25: ldir
          ld hl,command: call &BCD4       ;Initialisation
          ld (addr),hl
          ld a,c: ld (rom),a
          ld d,0: ld e,0                  ;D=first track, E=drive
.loop     ld hl,buffer: ld b,10           ;Main loop
.iloop    ld (hl),d: inc hl: inc hl       ;Poke track into buffer
          inc hl: inc hl: djnz iloop
          ld hl,buffer
          rst 3: dw addr                  ;Call disc ROM
          inc d: ld a,d                   ;Loop until last track
          cp 41: jr nz,loop
          ret
.buffer   db 0,0,&10,2,0,0,&15,2,0,0,&11,2,0,0,&16,2
          db 0,0,&12,2,0,0,&17,2,0,0,&13,2,0,0,&18,2
          db 0,0,&14,2,0,0,&19,2
.command  db &86                          ;CTRL-F, format track
.addr     dw 0                            ;Far address
.rom      db 0
.xpb      dw 40: db 3,7,0                 ;XPB values for 205k
          dw 204,63,&C0,16,0
          db &10,10,32,50,&E5,2,4
          db 0,0,&FF
```

You'll also need to poke the appropriate values into the XPB (eXtended Parameter Block) to tell the CPC how to read these discs. To do this, just copy the data above to the address stored at &BE42, as shown in the first few lines of the listing.

The listing above works with drive A. To use drive B, you'll need an `ld e,1` instead of an `ld e,0`, and you'll also need to add &40 to the value obtained from &BE42.

Alternatively, *ParaDOS* (available from *Better Than Life*, 298 Holton Road, Barry, South Glamorgan – or Campursoft on ☎ 041 554 4735) will read and write to this format automatically. And you may also be able to find Rob Scott's *Ultraform* utility – a past *AA* listing – floating around the public domain. The choice is yours – do you want to type out the answer, buy the answer or hunt for the answer to your question? **Richard**

they are too slow. I would like to do platform games in machine code, but I can't work out how to tell what the character what they can or cannot stand on. In BASIC I can use an array, but this wouldn't be possible in machine code, and a table of values would take up too much memory (I think).
Thomas Lovell, Eye

1 I think what you're referring to is the *Print-Out* publication, in which case yes, it does include all the necessary info. We don't know of any current suppliers, but contacting WACCI (see the Amscene Directory on page 32) would be a good move. The books, *The Ins and Outs of the Amstrad* (Melbourne House) and *The Amstrad Advanced User Guide* (Glentop) will also serve you admirably – check out the ever-useful Small Ads (page 24).

You don't need a firmware guide for programming – one of the best programmers I've met had never seen a copy – but it helps enormously, although more so for utility writers than game coders.

2 Why should a table of values take up any more memory than an array? An array is simply a table of values accessible from BASIC, after all. However, you do have a point about memory usage. Let's say that the screens are made up of sprite building blocks (platforms, trees, etc), and that each screen contains 30 sprites across in 15 rows – a table of 450 bytes. 50 screens of this size would take up 22k, not an ideal situation.

Instead, you're better off storing each screen as a series of 'instructions'. For example, place a platform 12 sprites long at position (5,3). This takes up a lot less room, but makes detecting whether the character is standing on the platform tricky. The best solution, in fact, is to use both methods. Store one table in memory, and when the player moves onto a new screen, blank the table. Then 'draw' on it by following the instructions about where to place the platforms.

Good luck with the game. **Richard**

A right ROM do

1 How easy is it to transfer BASIC programs to machine code and transfer them to EPROM (with a good working knowledge of BASIC)?
2 I have the opportunity to buy a reasonably priced 3.5-inch disc drive at a very keen price (us married people have to be economical). What is the maximum current available on the Plus 5 supply rail (pin 27) of the expansion socket? Could you elaborate on the pin connections for use with my 6128 to a standard 3.5-inch drive?
3 What's the best DOS for using with a second 3.5-inch drive if I were to use the *DES* package?
Jim Furie, Glasgow

1 'Transferring' BASIC programs to machine code means rewriting them, so you won't get anywhere without a good working knowledge of machine code too. However, the John Morrison EPROM blower does come with an easy-to-use program to put BASIC programs on ROM, the maximum size being 16k. PD programs also exist to place your favourite machine code utilities on ROM.

2 I wouldn't advise powering the disc drive directly off the expansion socket, as messing around with ports connected directly to sensitive chips is never the safest of ideas. It is possible, though, to take a power feed out of the CPC's power connection to the monitor – my 3.5-inch disc drive is powered in this way. Or if you want to add a separate power supply, a 5v, 400mA one should do the job.

The connection between CPC and 3.5-inch drive is a simple pin-to-pin effort, although you might want to add a side switch to pin three.

3 DOS, *DES*... does it never end? *DES* is designed for *ROMDOS* compatibility, but *ParaDOS* does everything that *ROMDOS* does and much more besides, and co-exists quite happily with *DES*. It's probably your best bet.

By the way, bet your 'reasonably priced' disc drive isn't as much of a bargain as the next letter... **Richard**

Wow

I was recently able to pick up a dk'Tronics 256k silicon disc (fully working) for a fiver in a local computer shop. A bargain you say (*too right... mine cost £40! – Richard*) – I thought so, especially as I already have one that I bought some years ago that I have used successfully with both AMSDOS and CP/M.

Using an article in *AA46*, I was able to perform a hardware modification to my original silicon disc, enabling me to use it as either a 256k memory expansion or as a RAMdisc. 'Great,' I thought, 'all that extra space.' But my excitement was short lived.

I booted CP/M only to find that the system hanged after printing up the status line. There was no A> prompt and all I could do was reset the machine (a 6128). After a few experiments to see if I could identify the problem, I narrowed it down to the following: CP/M won't boot on my machine with a 256k RAM expansion fitted. Why does this happen, and can I do anything about it?

I also have an RS232 interface fitted to my 6128, the Amstrad/Pace version with the Commstar ROM fitted inside the box. When I plug the other silicon disc box in too (with its operating system ROM in it) so I can use it under AMSDOS, I do not get the sign on message from the silicon disc ROM, just the one from the Commstar ROM. I understand that this may be due to both of these ROMs trying to occupy the same slot. Out of interest, I opened up the RS232 interface box and noticed a spare area where a ROM could be fitted. Would my problem be solved if I took the silicon disc ROM out of its box, or would I be asking for disaster?
Nigel Shipp, King's Lynn

The silicon disc problem is a tricky one, but the most likely suggestion is that you have the model designed for the 464 and 664. This presumes the absence of the extra 64k of the 6128, and so

Band on the run

I have a problem. I have some music with loaders like this:

```
10 MEMORY &whatever
20 LOAD "filename.ext"
30 WHILE 1
40 CALL &BD19: CALL &whatever
50 WEND
```

These tunes will run if the computer isn't doing anything, but if you want to do anything the tune stops. Is there any way to change the programs so that the music will continue to play even when you are doing something else?
Tom Dean, Burslem


A band to run from...

If you want to run the tunes from within a BASIC program, you could always use the `EVERY` command to call the routine every fiftieth of a second. Try something like this:

```
30 EVERY 1 GOSUB 8000
...rest of program...
8000 CALL &whatever
8010 RETURN
```

However, this takes up an awful lot of processor time. A far better way to do it is to set up an interrupt from machine code to do the same thing. Give this a try:

```
10 IF PEEK(&AF00)=&21 THEN 80
20 FOR n=&AF00 TO &AF0B
30 READ a$: POKE n,VAL("&"+a$)
40 NEXT
50 DATA 21,20,AF,11,00,00
60 DATA 01,FF,80,C3,D7,BC
70 CALL &AF00
80 :
```

Change the last two numbers in line 50 to the address of the routine to call; for example, if it is `&4003`, make them read `,03,40`. And there we go – interrupt-driven music. That wasn't too difficult, was it? **Richard**

does not attempt to map some of its extra memory over it. CP/M Plus is a remarkably fussy beast when it comes to hardware, and it's probable that it's taking exception to this. There have been a number of revisions of the dk'Tronics hardware, and with some units, it is possible to make an alteration – in the same vein as the *AA46* article – to convert a 464/664 unit into a 6128 one. The hardware junkies at *BTL* (298 Holton Road, Barry, South Glamorgan) have experience of altering these units... drop 'em a line.

The Amstrad/Pace serial interface is a strange beast. As you've noticed, there's an extra space for a ROM-slot inside. The interface also maps the existing ROM in twice, so it appears in slots 4 and 5 (being a 32k chip) and 12 and 13. One possibility is that putting an extra ROM in might take up the 12/13 slot. However, take a look at the legends on the PCB under the chips; they read '27128/256'. It looks more like an alternative arrangement in case Amstrad ran out of 27256s (32k ROMs) and needed to fit two 27128s instead.

Throw out the Commstar ROM – it's a useless pile of junk. There are far better programs in the public domain – and keep the Silicon Disc operating system where it is. **Richard**

3.5 inch good, 3 inch bad

Why do you need a 3-inch drive before a 3.5-inch drive? Is it a compatibility problem or a hardware problem? Could I use it to store self-made programs or Type-Ins if I didn't have the 3-inch drive first?

A bit of a moan about the machine code course: yes, it is nice to know about XOR, AND and OR etc, but could we have a bit of information about firmware routines please? This would be easier for people who have come from BASIC so that they can use the same principles in their machine code programs that they used in BASIC, because the firmware routines are what BASIC uses.

Matthew Bland, Bury St Edmunds

You don't need a 3-inch drive first, as such, but you need some form of disc controller circuitry. This is only available in the 664, 6128 and 6128 Plus, and the DDI-1 interface box, all of which come with a 3-inch drive as standard. If you can get hold of a disc interface with a 3.5-inch drive – for example, Siren's clone – this will work just as well, and you can store your own programs on it (though not a lot of CPC software is ever officially released on 3.5-inch disc).

Yes, BASIC does use the firmware routines, but it uses a lot else as well. It's not just 'nice' to know about XOR, AND and OR, it's ruddy essential – they are the nuts and bolts of machine code programming. You'd feel a bit annoyed if a BASIC tutorial went straight into the EVERY command (a firmware operation, believe it or not) without explaining the IF command first... **Richard**

Techy troubles?

If your printer's not perfect, your word-processor not wonderful, or your keyboard not kompliant (er...), Techy Forum is here to sort you out. Write to Techy Forum, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. Oh, and don't forget to enclose a note begging for Simon's classic *Boo! the Ghost Construction Kit* to make a long-awaited covertape appearance.

Top Tips

Abstract designs



***Screen Designer*: somebody should have designed a better file format.**

With reference to David Cash's problem in loading *Screen Designer* screens (*AA104*), the loader given does not work. The screens are saved as headerless files with a sync character of 255 and a machine code loader program in front of them; it is the loader program that causes the trouble, as it just loops after the screen is loaded and does not return to BASIC.

Having encountered this problem myself when I got *AA96*, I hacked into the loader program and found the sync character. I've written the following 12-byte program, which should be at the start of any BASIC program you want to load the screen into:

```
10 REM ************
20 FOR i=374 TO 385
30 READ a$: POKE i,VAL("&"+a$)
40 NEXT
50 DATA 3E,FF,21,00,C0,11,00,40,CD,A1,BC,C9
```

When you want to load a screen, run the above program, then type `CALL 374`, and position the tape at the start of the headerless file (skipping past the loader); the screen will load, and when it's finished, will return to BASIC or the rest of the program.

When you've run the program once, lines 20-60 can be deleted, but you must leave line 10.

Tony Newell, Keighley

Did you ever own a Sinclair ZX81? (*I did – a shamed Dave.*) I seem to remember that poking machine code into REM statements was de rigeur on that prehistoric machine. Anyway, many thanks for a short but very sweet listing. All I can say is, what a ridiculous file format! **Richard**

Happy hackers

In *AA106*, Robert Stewart asked why *Academy* wouldn't run on his Plus. Since then, *Better Than Life* (298 Holton Road, Barry, South Glamorgan, Wales) have contacted us to say that they will happily hack any non-multiload game with similar problems so that Plus owners can play it, free of charge. Just send along the game tape and a disc for the new version to be run from. Can't be bad.

Be there or be square

Now this is what I call a techy routine. Forget your wimpy BASIC programs and machine code "Hello World!" routines, this subroutine will square the number in HL and return the result in the 32-bit pseudo-register DEHL. It's pretty fast, too.

```
.sq_hl     ld a,16                              ;A    =number of bits
           ld bc,0: ld d,h: ld e,l              ;BCDE =to add each time
           ld (store),bc: ld (store+2),bc       ;store=current total
.sq_loop   rr h: rr l: jr nc,nosqa
           push hl
            ld hl,(store+0): add hl,de
            ld (store+0),hl: ld hl,(store+2)
            jr nc,jaddbc: inc hl
.jaddbc     add hl,bc: ld (store+2),hl
           pop hl
.nosqa     or a: rl e: rl d: rl c: rl b         ;BCDE=BCDE*2
           dec a: jr nz,sq_loop                 ;loop 16 times
           ld de,(store+2): ld hl,(store)
           ret
.store     ds 4
```

Array Carpenter

For the wimpy BASIC programmers (read: well-adjusted members of the community who don't know a DAA from an RLD and don't particularly want to), have you ever considered speeding up your programs using arrays? For example, if you're drawing a lot of circles, try reading the SIN and COS values into two arrays of 360 elements each at the start of the program. It takes up a bit of memory, but it saves the computer having to bother with slow trigonometry calculations every time you want to draw a circle.



RoutePlanner

How do you get there from here? If you're planning on driving then here's a program which might just have the answer. Dave Golder puts on his flat cap and driving gloves to take RoutePlanner out for a spin...

The shortest distance between two points is a straight line. Fair enough. But, as always, theory and reality are poles apart. If you want to drive from Gretna to Glastonbury in a straight line you'd need something like an amphibious tank armed with enough missiles to demolish a few thousand buildings and a thick enough skin to withstand the ire of hundreds of farmers all going red in the face and shrieking, "Ger orfff moi lahnd."

Nope, the reality is, if you want to get from A to B in Britain, you normally have to travel along a route that takes you on a tour around the rest of the alphabet. The British road system makes about as much logic as a tax returns form. So any help you can get to find out how to the best way to get from where you are to where you want to be is much appreciated.

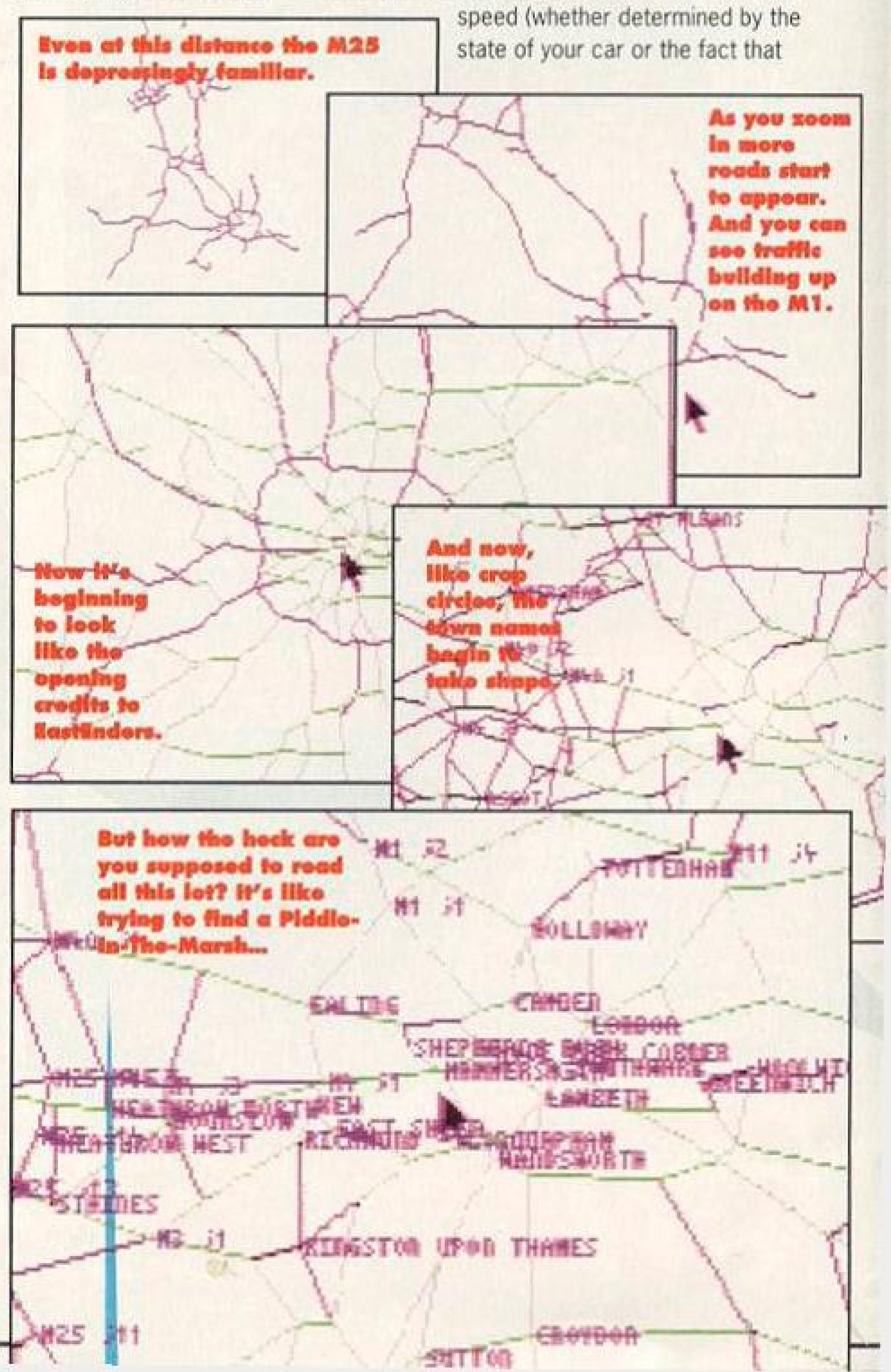
Step forward *RoutePlanner*. The CPC's answer to *Autoroute* is the pet project of AA's very own techy supremo Richard Fairhurst. The purpose of the program is to help you plan a road route from one town to another anywhere in the UK, taking into account such things as traffic jam trouble spots, the speed of your car and the fact that motorways can (in theory, but we all know what that means) be faster to travel along.

It sounds like a mammoth coding task. In fact it was a mammoth coding task. And the results demonstrate the enormous effort that has been put into the program. But we've all seen 'worthy' coding exercises before – software that has obviously taken ages to write but which ends up about as exciting and useful as a model of Dungerness nuclear power station built out of matchsticks.

So, does *RoutePlanner* actually work? Does it serve a worthwhile purpose? Can you use it without a degree in higher mathematic? Or is just a impressive curiosity that'll run out of novelty value the 900th time you have to click on a button the size of a pixel?

To be honest, *RoutePlanner* is not perfect, and there a number of irritation, but overall, it's a pretty darned impressive piece of work. It does everything you could want it to. A bit slowly perhaps, but it gets there.

You start off on the main map, From there you zoom in and choose your starting point. Next you have to tell the program where you want to go. Then you can indicate whether there are any places you want to avoid (for whatever reason) and even suggest a preferred travelling speed (whether determined by the state of your car or the fact that



Even at this distance the M25 is depressingly familiar.

As you zoom in more roads start to appear. And you can see traffic building up on the M1.

Now it's beginning to look like the opening credits to Eastenders.

And now, like crop circles, the town names begin to take shape.

But how the heck are you supposed to read all this lot? It's like trying to find a Piddle-in-The-Marsh...



Auntie Maud's going to be in the back, and you know what she's like).

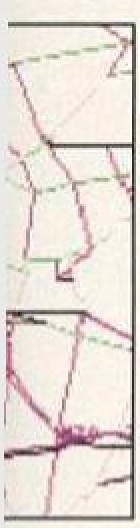
Then the program works out the optimum route and tells you how many miles the journey will be, how long it (should) take, which roads to use, and how far you need to travel along them, and which towns and cities you should pass through on the way. This 'itinerary' can be printed out so that you can refer to it when you're on the road (presumably you won't be able to plug in your CPC in the car). All this takes on average about a minute.

The list of towns and roads included is impressively large. If you live in some village in the middle of Dartmoor you're going to be disappointed but there's bound to be a town in the program that's near enough to make the program useful to you.

It's extremely simple to use, and offers loads of keyboard short-cuts to make life easier – you can zoom in and out, or centre the map using the CONTROL and COPY keys. The one thing missing from the version we reviewed was the option to locate towns by typing in the names; Richard promises this feature will be included in the released version, and it should make using the program a hell of a lot less fiddly (if you use the demo, you'll know how hit and miss it can be trying to latch the town you want).

But as I said, it's not perfect. The maps are not particularly clear and some of the place names are unreadable. And it'd make a life a lot simpler if you could scroll around the map instead of having to zoom in and out all the time. And that cursor – has it got inertia on it, or something? Is it supposed to add a bit of a gaming challenge? Personally, I reckon the program should allow for joystick control.

And it is slow. The problem is, it probably couldn't go any faster – the lack of speed is down to the CPC's limitations (go on, admit it, it does have limitations). So as you watch the maps appear on screen like ice forming on a window, you have to just grin and bear it, and be thankful that someone's at least gone to the bother of trying to get a program like this to work on the CPC.



Don't let this put you off, though. *RoutePlanner* is a mightily ambitious piece of software that just about comes off. Sure, the most impressive thing about it is that it's even been done, and it undeniably will attract a great deal of interest just because of the novelty factor, but the bottom line is, IT WORKS. It might be a touch creaky, but it produces the goods. **Dave**

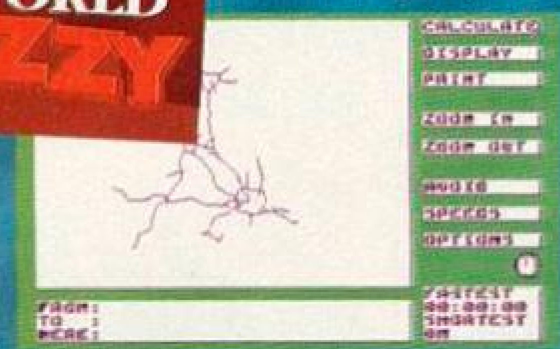
Statistix

Name: *RoutePlanner*
Author: Richard Fairhurst
Price: £19.99
Format: 128k only
Supplier: Sentinel Software, 41 Enmore Gardens, East Sheen, London, SW14 8RF ☎ 081 876 70332

Rating: 88%

Get on the right track

Ever wondered how to get from Chorley to Canterbury? Probably not. But here's how you'd find out using our covertape demo, just in case...



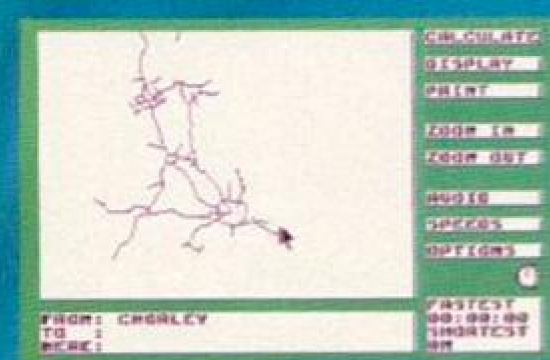
1 This is the main map that you'll see when you first load up the demo. Position the cursor (using the cursor keys) over area which contains the town from which you want to start.



2 Press COPY. Now zoom in either by moving the cursor to the ZOOM IN button or using CONTROL I. There are five levels of magnification. This is the third – you can see the increased detail.



3 When you can see it, move the cursor over your starting town and press COPY. The name of the town will appear next to HERE. Move the cursor up to FROM and press COPY again.



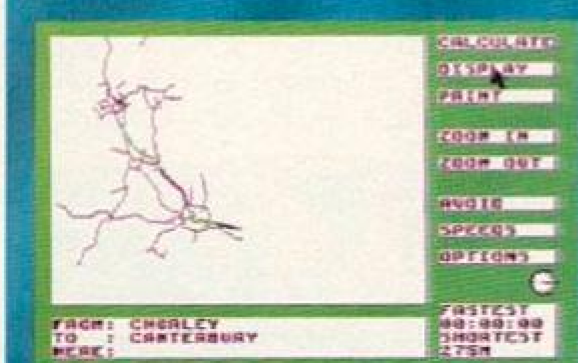
4 The name of the town will now appear next to FROM. Now you need to select your destination. ZOOM OUT (either by using the button provided or pressing CONTROL and O on your keyboard).



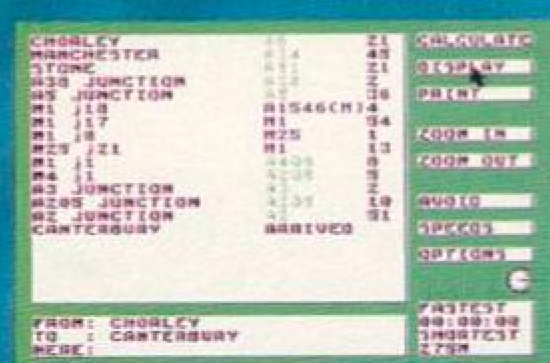
5 Select your destination using the same method as before. When the name appears next to HERE, move the cursor up to TO and press COPY. The destination will now appear next to TO.



6 Click on CALCULATE (using the COPY key, remember). The clock in the bottom right will now indicate that the computer is thinking about the route. This will take about a minute or so.



7 When the computer has finished calculating (you can also use CONTROL C), the route will be shown on the map as a bold line. You can move about the map in the same way as before.



8 Click on DISPLAY to reveal a table describing details of the route. The box at the bottom right also tells you the overall distance of the journey. CONTROL and D will also toggle the display.

So why do I need a Multiface?

Fancy adding a few extra boxes to the back of your CPC? Not sure what a lot of them do? Never fear, Richard Wildey is here with the first part of a new series which each month will take a specific piece of hardware and tell you why you never knew you couldn't live without it.



If you haven't got a multiface, you don't know what you're missing.

The Multiface is probably the most popular CPC add-on available, but what do you do with yours? Are you using it to its full potential? You probably bought your Multiface with the intention to back-up games, but beyond that single red and yellow line of commands lies a multitude of possibilities.

Saving positions

As well as saving your games to disc you can also use it to save your position in a game. Save it just before the end-of-level guardian blasts you to kingdom come, then should the inevitable happen give him another go later.

Listing one

```
10 ' LISTING 1. MULTIFACE screen load and
saver
20 MEMORY &3FFF
30 MODE 2:CAT:INPUT "Enter filename (Without
extension)";f$
40 LOAD f$,&4000
50 CALL &8000
60 SAVE f$+".SCR",b,&C000,&4000
```

POKEs

If that doesn't make your games easier then the infamous POKEs will. Using your black box you can by-pass all protection a game has and POKE values directly into the CPC's memory, such as the number of lives you wish to have. Back in issue 90 we printed the most comprehensive list of Multiface pokes you will ever find – make use of it. There is also a large database of Multiface pokes floating around the PD libraries if you feel a thirst for any more.

It's possible to find your own game POKEs though this requires some machine code knowledge. The *J W Brown* disc utility, a PD disc, has been written to make your life easier. It searches Multifaced games for variants of the way in which a programmer can make the number of lives decrease in a game.

Doing it yourself

If you know what you're looking for and are doing the searching yourself you can either load the unprotected, saved game into memory or use the Multiface, in conjunction with Romantic Robot's own *Insider* or the excellent *Tearaway* from CPC Network, to freeze the game during play and search the memory. Both *Insider* and *Tearaway* give you many other functions including the ability to view memory and most importantly disassemble code. Once you have made your desired changes you can return to the game.

Both of these programs work by storing themselves in the 8K RAM inside a Multiface, in the *Insider*'s case it stores a small routine to load the rest of the program from disc, *Tearaway* also uses the extra banks of a 128K machine to store the main code. Where both of these programs fall down is their inability to save sections of code to disc; for that you'll need *HackIt*.

Only two other programs have made use of this method of by-passing the protection of a program; these are *Soundhacker Pro* by STS, which is designed to hunt out and save tunes created with *Soundtrakker*, a much-used utility by the demo-writing fraternity; and the other is *The Ultimate Sprite Searcher* which allows you to stop a game and hack the sprites from it.

Saving graphics

The Multiface alone provides the useful feature of being able to save graphics, in the form of screens. The format in which they are saved, saves not only the screen but also the inks and the CRTC settings (the screen size).

This, though all well and good for viewing the screen alone, is compatible with very few art packages. Listing one is just a simple program with will load in a standard sized Multifaced screen at &4000; CALL it to display and save it out as a standard screen, compatible with most if not all art packages and other such programs.

This program will only cope with standard-sized screens. Some games use the a Spectrum-sized screen. The Amstrad screen can display 80 characters on one line (in MODE 2) whereas the Spectrum can only display the equivalent of 64 characters, giving you a much thinner screen. Listing two converts these annoyingly-sized screen to the standard format.

Listing two

```
10 CLEAR:DEFINT a-z:MODE 2
20 PRINT CHR$(24)+" Multiface Spectrum to
Amstrad screen size
converter .By R.Wildey 1994. "+CHR$(24)
30 CAT:INPUT "Enter Screen filename (Without
extension) ",f$
40 MEMORY &3FFF:LOAD f$,&4000
50 IF PEEK(&8079)<>32 THEN PRINT "This is
not a Spectrum screen."
60 MODE PEEK(&8088) AND 3
70 FOR a=a TO a+63:POKE &C000+c+a+s,PEEK
(&4000+a+c):NEXT
80 s=s+16
90 IF a<1575 THEN GOTO 70
100 c=c+&800:IF c=&4000 THEN |ERA,f$+".b
in":SAVE f$+".scr",b,&C000,&4000:END
110 a=0:s=0:GOTO 70
```

If you've executed a Multifaced screen (CALL &8000), discovered it was a Spectrum-sized one and want to return to the CPC size (no doubt you will, in case the CPC starts to perform other spectrum-esque functions such as somebody sneezing next door causing the power pack to wobble and the entire machine to crash) then enter:

```
OUT &BC00,1: OUT &BD00,&28: OUT &BC00,2:
OUT &BD00,&2E: OUT &BC00,6:OUT &BD00,&19
```

And you should now be restored to full normality (unless you're Dave, of course, in which case concepts of normality don't really apply)



If it wasn't for the Multiface AA would have a hell of a time getting screen grabs...

Assembly line

New Assembly Line supremo Rob Buckley jumps straight in at the deep end and looks at a rather snazzy effect which will jazz up those dull programs.

Let's get straight into action, since we've something large to fit into a very tight space (ooh er!). Yes this month we're looking at a compact(ish) routine I call *Graphics Scaler*. Put simply, this is a piece of code which will take a normal area of graphics data such as a sprite, and then display at any size from one byte wide and one byte high to 80 bytes wide and 200 high.

The first part of this code is a grab routine (REF 1); it grabs an area of screen and stores it in memory. This is pretty standard so I won't go into details. Here's how to call it:

```
CALL &A000,(address),x (0-79),y (0-199),width in bytes,pixels high
```

When trying to scale something you need to know the size of the original and proposed areas. If the original is 20 pixels high and you want to produce one 10 pixels high you would skip each alternate line. That is:

$$\frac{\text{Original}}{\text{Proposed}} = \text{Number to skip}$$

Here's the algorithm of how this is achieved.

1 A = Proposed
2 A = A – Original
3 If A is negative Jump to 6
4 Redraw line
5 Jump to 2
6 A = A + Proposed
7 If A is negative then Skip a line & Jump to 6
8 Get Line from original
9 Jump to 4

This can be seen at REF 3 in the listing.

Horizontally, however, there's more than one pixel to a byte, unlike in the vertical routine above. You can get around this by taking each byte and storing it as individual pixels, eg, each byte results in two bytes, one for each pixel in MODE 0. This is then converted into a similar pixel-by-pixel group of bytes using the previous algorithm, which is then joined back into a single byte to be pasted back on the screen.

To use this routine:

```
CALL &A038,Addr of data,Width of data,Height of data,X (0-80),Y (0-199),New width,New Height
```

Hang on, I hear you cry, what's all this code (REF 2) at the start of the routine? Well, this is what makes it so quick. When calculating horizontally the same algorithm will be repeated for each line, eg, the fourth pixel may become the ninth pixel, but this will be the same on lines 1, 2, 3 and 20. So, therefore, the quickest method is to have a routine dedicated to producing the desired effect. This is called self-modifying code, and is generated at the start of the routine producing a piece of code specially designed to do the calculation for horizontal pixels automatically rather than referring to the scaling algorithm each pixel. This routine appears on running at location DATAPUT, so why not dissassemble it and take a look? Go on, you know you want to. AA

NEXT MONTH

This routine should give you all lots of fun zooming in and out of the screen. When we return next month we are going to look at screen compacting; that is squeezing a standard screen, or any graphics, into a smaller amount of memory. Also if you have any queries on Assembly or Machine code why not just drop us a line at the usual address – *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

Graphics Scaler

```
*** REF 1
           ORG &A000
Grab:      CALL GetScrAdr
           LD E,(IX+8)
           LD D,(IX+9)
           LD A,(IX+0)
Gloop:     LD C,(IX+2)
           LD B,0
           LDIR
           PUSH AF
           LD HL,(Tmp1)
           CALL &BC26
           LD (Tmp1),HL
           POP AF
           DEC A
           JP NZ,Gloop
           RET
GetScrAdr:LD L,(IX+4)
           LD H,0
           LD DE,0
           CALL &BC1D
           LD E,(IX+6)
           LD D,0
           ADD HL,DE
           LD (Tmp1),HL
           RET
**** REF 2
Scale:     LD A,(IX+10)
           RLA
           LD C,A
           LD A,(IX+2)
           RLA
           LD B,A
           LD HL,DataPut
           LD A,C
           SUB B
           JP NC,HCalc10
           LD A,B
           LD (Num1),A
           LD (Mrk1+1),A
           LD A,0
HCalc1:    LD (HL),&ED
           INC HL
           LD (HL),&A0
           INC HL
           SUB C
           JP NC,HCalc2
Mrk1:      ADD 0
           JP HCalc3
Hcalc2:    LD (HL),&2B
           INC HL
Hcalc3:    LD (Tmp1),A
           LD A,(Num1)
           DEC A
           JP Z,Next
           LD (Num1),A
           LD A,(Tmp1)
           JP HCalc1
Hcalc10:   LD A,B
           LD (Num1),A
           LD A,C
           LD (Mrk2+1),A
           LD A,0
Mrk2:      ADD 0
           LD C,0
Hcalc11:   INC C
           SUB B
           JP NC,HCalc11
           LD (Tmp1),A
           LD (HL),&ED
           INC HL
           LD (HL),&A0
           INC HL
           LD A,C
HCalc12:   DEC A
           JP Z,HCalc13
           LD (HL),#23
           INC HL
           JP HCalc12
HCalc13:   LD A,(Num1)
           DEC A
           JP Z,Next
           LD (Num1),A
           LD A,(Tmp1)
           JP Mrk2
***** REF 3
Next:      LD (HL),&C9
           LD E,(IX+12)
           LD D,(IX+13)
           LD (Tmp2),DE
           CALL GetScrAdr
           LD A,(IX+0)
           LD B,A
           LD (Cnt),A
           LD C,(IX+8)
           LD A,0
           JP MainLoop
MloopPop:  POP AF
           POP BC
MainLoop:  SUB C
           JP C,IfNeg
           PUSH BC
           PUSH AF
Main:      CALL PutScr
           LD A,(Cnt)
           DEC A
           LD (Cnt),A
           JP NZ,MloopPop
           POP AF
           POP BC
           RET
SkipLine:  LD HL,(Tmp2)
           LD E,(IX+10)
           LD D,0
           ADD HL,DE
           LD (Tmp2),HL
IfNeg:     ADD B
           JP M,SkipLine
           PUSH BC
           PUSH AF
           CALL GrabScr
           CALL Convert
           JP Main
GrabScr:   LD B,(IX+10)
           LD HL,Data1
           LD DE,(Tmp2)
Gloop1:    LD A,(DE)
           AND %10101010
           RRA
           LD (HL),A
           INC HL
           LD A,(DE)
           AND %1010101
           LD (HL),A
           INC HL
           INC DE
           DJNZ Gloop1
           LD (Tmp2),DE
           RET
Convert:   LD HL,Data1
           LD DE,Data2
           CALL DataPut
           RET
Putscr:    LD HL,(Tmp1)
           LD DE,Data2
           LD B,(IX+2)
PLoop1:    LD A,(DE)
           RLA
           LD C,A
           INC DE
           LD A,(DE)
           OR C
           LD (HL),A
           INC DE
           INC HL
           DJNZ Ploop1
           LD HL,(Tmp1)
           CALL &BC26
           LD (Tmp1),HL
           RET
Tmp1:      DS 2
Tmp2:      DS 2
Num1:      DS 1
Cnt:       DS 1
Data1:     DS 160
Data2:     DS 160
DataPut:   DS 400
```

Type-ins

Fancy a bit of DIY? Here are a couple of listings which should keep you going for a while. And if you've already done it yourself, you could be onto a nice little earner, as guest Type-Ins host Keith Woods explains...

This month Chris Morgan steals all the glory with a nifty animation program and a crazy racer. Glory's not all he gets, however. He also walks away with a crisp new tenner (or he will if we can read his address on the letter)! Green with jealousy? Don't be. You too can get your hands on some of the cash. It's really simple, honest it is! Just read the box below...



An early test for the Channel 4 logo.



Ultimately it was rejected.

ANIMATOR

Animator is a rather nifty little program, for, erm... doing line animation (well there's a surprise). It uses an 'in-betweening' technique to metamorphose one drawing into another, with the possibility of using a number of different pictures in a sequence.

Animator features a handy little menu which makes it all very easy to use. One thing you need to know, though, is that each frame must use the same number of lines so the computer will not allow more lines on subsequent frames. Oh yeah, and it's a bit slow, but being Basic you'd guessed that anyway hadn't you?

```
Filename:ANIMATOR
EAAM 10·REM·Animator
GAOP 20·REM·by·Chris·Morgan
DACB 30·REM·(c)1994
BAIG 40·REM
DAHG 50·DEFINT·a-z
IAAE 60·SYMBOL·255,120,240,240,248,156,14,7,3
EAPC 70·MODE·2:GOTO·590
OAAF 80·INPUT"No.·of·frames";fr:IF·fr<2·OR·fr
     >15·THEN·80
IBPB 90·DIM·x1(fr,40),x2(fr,40),y1(fr,40),y2(
     fr,40),xs1!(fr,40),xs2!(fr,40),ys1!(fr,4
     0),ys2!(fr,40)
CAII 100·pic=-1
FAFI 110·IF·y>398·THEN·y=398
FABE 120·MODE·2:lx=0:ly=0
DAAI 130·x=320:y=200
DANK 140·x1=x:y1=y
GADB 150·PRINT·CHR$(23);CHR$(1);
BADJ 160·TAG
HAEE 170·PLOT·x,y:PRINT·CHR$(255);
EAAE 180·xx=x:yy=y
GAFE 190·y=y+INKEY(0)-INKEY(2)
GACE 200·x=x+INKEY(1)-INKEY(8)
CBIL 210·IF·INKEY(47)=0·AND·ABS(pic)=1·AND·pi
     c=-1·AND·n(1)>1·THEN·pic=-2:GOTO·120
IBDL 220·IF·INKEY(18)=0·AND·n(ABS(pic))<50·AN
     D(lx<>x·OR·ly<>y)THEN·lx=x:ly=y:pic=-pic
     :GOTO·310
EAMJ 230·IF·x<0·THEN·x=0
FABI 240·IF·x>638·THEN·x=638
FAKI 250·IF·y>398·THEN·y=398
EABK 260·IF·y<0·THEN·y=0
HABN 270·IF·xx=x·AND·yy=y·THEN·190
CBMI 280·MOVE·xx,yy:PRINT·CHR$(255);:MOVE·x,y
     :PRINT·CHR$(255);:MOVE·xx,yy
MABC 290·IF·pic>0·THEN·DRAW·x1,y1:DRAW·x,y:GO
     TO·180
JACA 300·PLOT·xx,yy:PLOT·x,y:GOTO·180
EBDP 310·IF·pic>0·THEN·x1=x:y1=y:x1(pic,n(pic
     )+1)=x:y1(pic,n(pic)+1)=y:GOTO·190
FAOJ 320·n(-pic)=n(-pic)+1
LAEM 330·x=xx:y=yy:TAGOFF:PRINT·CHR$(23);CHR$
     (0);
KABD 340·DRAW·x1,y1:PRINT·CHR$(23);CHR$(1);:T
     AG
DAMC 350·MOVE·x,y
LAPM 360·x2(-pic,n(-pic))=x:y2(-pic,n(-pic))=
     y
OAAM 370·IF·-pic=fr·AND·n(fr)=n(1)THEN·n=n(1)
     :TAGOFF:GOTO·400
OAOG 380·IF·n(-pic)=n(1)AND·-pic<>1·THEN·pic=
     pic-1:GOTO·120
CAPK 390·GOTO·190
GAHB 400·WHILE·INKEY$<>"":WEND
LALP 410·INPUT"No.of·steps";st:IF·st<1·THEN·4
     10
HAEM 420·MODE·2:PRINT·CHR$(23);CHR$(1);
EAIK 430·FOR·c=1·TO·fr-1
ABOC 440·x1(c,0)=x1(c,1):x2(c,0)=x2(c,1):y1(c
     ,0)=y1(c,1):y2(c,0)=y2(c,1)
DAAO 450·FOR·a=1·TO·n
BBFP 460·xs1!(c,a)=(x1(c+1,a)-x1(c,a))/st:xs2
     !(c,a)=(x2(c+1,a)-x2(c,a))/st
BBMP 470·ys1!(c,a)=(y1(c+1,a)-y1(c,a))/st:ys2
     !(c,a)=(y2(c+1,a)-y2(c,a))/st
DAEH 480·NEXT:NEXT
DAEO 490·FOR·a=1·TO·n
MAJE 500·MOVE·x1(1,a),y1(1,a):DRAW·x2(1,a),y2
     (1,a):NEXT
```

Earn some dosh

A wind of change has blown through the *AA* office, and this time it wasn't even Simon's fault. The smell of money is in the air once again, and what's more, with a little bit of effort, you can get your grubby hands on it.

All you have to do is send us a Basic program of your own concoction, better known as a type-in. It'll need to be good, though, if you want to get your hands on any of the money that's up for grabs. You'll have to do better than producing yet another bat'n'ball clone or simple disc organiser (we get plenty of them each month as it is) to qualify for financial reward. The best program printed each month will win the author the princely sum of ten new pounds (well it's princely for *AA* anyway), not to mention the fame and glory derived from an appearance in these hallowed pages (we like to kid ourselves).

Anyway, if you want your program to be even considered for publication then there are a few basic guidelines you'll need to follow:

1 Keep it short. No-one can be bothered typing in a 500-line program, no matter how good it is. Neither are we going to use half the mag to print it. 5k would usually be the maximum, but we may consider programs of up to 8k if they're exceptional (we're talking really mega type-ins here though).

2 Please, please, please only send us programs on disc or tape. We much prefer discs – we always look at them before the tapes, so you'll be improving your chances if you send a disc. Any printed listings will just go straight into the bin.

3 Your program must be all your own work. Type-ins from the back of your CPC manual are definitely not acceptable – any further copies of *Bomber* (we got another this week) will join the listings in the bin.

4 If possible try to make sure that your program works on all CPCs. Your program will have less chance of being printed if it uses 6128-only commands, as we don't like printing programs that are useless to half our readers.

5 Please include all necessary documentation with your type-in. We've got very little patience so if we can't figure out how to use your program within about five seconds, it'll be hurled into the bin with great gusto.

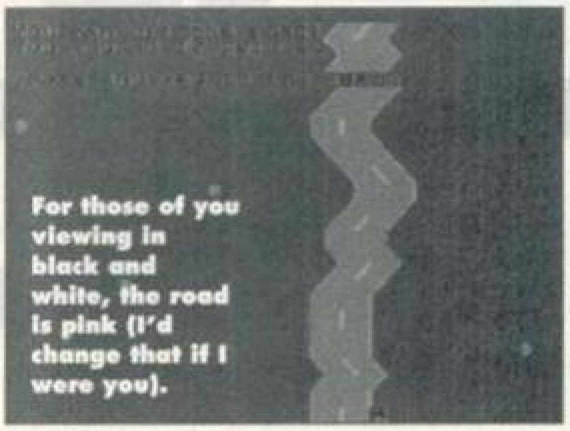
So what are you waiting for? Get typing! Once you've finished your program, pop it in a jiffy bag and send it to:

Type-Ins, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

££

Actually, this many pound signs is a bit of an exaggeration, but you get the point.

```
EAHK 510·FOR·c=1·TO·fr-1
EAIF 520·FOR·b=1·TO·st
DAPN 530·FOR·a=1·TO·n
OAMH 540·MOVE·x1(c,a)+(xs1!(c,a)*(b-1)),y1(c,
     a)+(ys1!(c,a)*(b-1))
OAIH 550·DRAW·x2(c,a)+(xs2!(c,a)*(b-1)),y2(c,
     a)+(ys2!(c,a)*(b-1))
NAAC 560·MOVE·x1(c,a)+(xs1!(c,a)*b),y1(c,a)+(
     ys1!(c,a)*b)
NAMB 570·DRAW·x2(c,a)+(xs2!(c,a)*b),y2(c,a)+(
     ys2!(c,a)*b)
EAOO 580·NEXT:NEXT:NEXT
IBFK 590·LOCATE·1,24:PRINT"[D]isc·(save)··[L]
     oad··[N]ew·design··[R]eplay··[S]tep·size
IABP 600·a$=UPPER$(INKEY$):IF·a$=""THEN·600
PALO 610·IF·n=0·AND(a$="D"OR·a$="R"OR·a$="S")
     THEN·PRINT·CHR$(7);:GOTO·600
MAPA 620·IF·a$="R"AND·st=0·THEN·PRINT·CHR$(7)
     ;:GOTO·600
LAFL 630·ON·INSTR("·DLNRS",a$)GOTO·600,660,72
     0,650,420,410
CAJK 640·GOTO·600
EANB 650·CLEAR:GOTO·80
```



For those of you viewing in black and white, the road is pink (I'd change that if I were you).

```
IAKO 660·INPUT"Save·:·Filename·:·",f$
DABJ 670·OPENOUT·f$
EAFE 680·PRINT#9,fr,n
HACL 690·FOR·a=1·TO·fr:FOR·b=1·TO·n
KAIP 700·PRINT#9,x1(a,b),x2(a,b),y1(a,b),y2(a
     ,b)
IABE 710·NEXT:NEXT:CLOSEOUT:GOTO·600
KAJH 720·CLEAR:INPUT"Load·:·Filename·:·",f$
GABP 730·OPENIN·f$:INPUT#9,fr,n
IBBF 740·DIM·x1(fr,40),x2(fr,40),y1(fr,40),y2
     (fr,40),xs1!(fr,40),xs2!(fr,40),ys1!(fr,
     40),ys2!(fr,40)
HAPK 750·FOR·a=1·TO·fr:FOR·b=1·TO·n
LABA 760·INPUT#9,x1(a,b),x2(a,b),y1(a,b),y2(a
     ,b)
HAGO 770·NEXT:NEXT:CLOSEIN:GOTO·600
```

CAR RALLY

Fortunately Chris Morgan's programming is better than his spelling (there's no 'e' in Rally mate), so when he saw Simon's efforts at programming a racing game in *AA*106's Basically Basic, which he assures us he doesn't usually read (yeah, yeah... thousands wouldn't, but we believe you), he just had to write a better version (to be fair, Simon's program was only supposed to be an example of particular Basic routines).

The result is a racing game with a simple objective – whatever you do, stay on the road! Unfortunately, this is complicated somewhat by the



Some very drunk Romans must have built this road.

fact that there are no brakes – aaarrgghh! Since the road never ends this is more of an endurance test than anything else. Happy motoring!

```
FAEC 10·REM·Car·Ralley
GAOP 20·REM·by·Chris·Morgan
DACD 30·REM·(c)·1994
BAIG 40·REM
NAOA 50·PRINT"Press·any·key·to·start":CALL·&B
     B18
BAMP 60·MODE·1
HAGP 70·SYMBOL·254,16,84,56,146,84,56,16,16
JABF 80·SYMBOL·255,126,133,255,255,195,255,16
     1,129
KADK 90·INK·0,19:INK·1,13:INK·2,26:INK·3,6:BO
     RDER·19
NAFJ 100·WINDOW·18,21,1,25:PAPER·1:CLS:PAPER·
     0:WINDOW·1,40,1,25
GAAA 110·FOR·n=400·TO·0·STEP-48
HAEO 120·PLOT·304,n,2:DRAWR·0,-16:NEXT
DAHJ 130·DEFINT·b-z
EACN 140·minx=18:cx=18
FADL 150·a=(RND*3)+1:a=FIX(a)
MAPJ 160·IF·a=1·AND·minx<6·OR·a=3·AND·minx>32
     ·THEN·150
CANC 170·n=n+1
HAJL 180·IF·a=1·THEN·minx=minx-1
HBPA 190·l=3:IF·a=1·THEN·c=213:c2=215·ELSE·IF
     ·a=2·THEN·c=143:c2=143:l=2·ELSE·IF·a=3·T
     HEN·c=214:c2=212
HAHJ 200·IF·INKEY(8)=0·THEN·cx=cx-1
HAPI 210·IF·INKEY(1)=0·THEN·cx=cx+1
GAFL 220·LOCATE·1,1:PRINT·CHR$(11)
OAOO 230·PEN·3:PAPER·1:LOCATE·cx,25:PRINT·CHR
     $(255);:PAPER·0:PEN·1
EAHK 240·LOCATE·minx,1
KANC 250·PRINT·CHR$(c);STRING$(l,143);CHR$(c2
     );
FAMN 260·IF·n·MOD·3<>0·THEN·290
ABAP 270·IF·a=1·THEN·PLOT(minx+l-2)*16,400,2·
     ELSE·PLOT(minx+l-1)*16,400,2
EAJO 280·DRAWR·-16*(a-2),-16
GBOP 290·IF·RND<0.4·THEN·z=(RND*40)+1:IF·z<mi
     nx-2·OR·z>minx+6·THEN·LOCATE·z,1:PRINT·C
     HR$(254);
NAIF 300·IF·TEST((cx)*16,8)=0·AND·TEST((cx-5)
     *16,8)<>0·THEN·340
NAEL 310·IF·TEST((cx-2)*16,8)=0·AND·TEST((cx+
     3)*16,8)<>0·THEN·340
HAFL 320·IF·a=3·THEN·minx=minx+1
CAFK 330·GOTO·150
NAHL 340·LOCATE·1,1:PEN·3:PRINT"You·ran·off·t
     he·road!
LAIK 350·PRINT"You·scored";INT(n/4);"points
IAME 360·FOR·a=1·TO·1000:a$=INKEY$:NEXT
CBAB 370·PRINT:PRINT"Press·any·key·to·try·aga
     in":CALL·&BB18:RUN·60
```

Typing listings

If you've never typed in a listing from *AA* before, then reading the following blurb is a REALLY GOOD IDEA.

- **Basically, all you need to do is make sure you type in exactly what we print EXCEPT the first four letters in each line.**
- **The first four letters are a code which work in conjunction with our unique and utterly excellent *TypeChecker* program below.**
- **Only press RETURN when you get to the end of a command line. If a command line goes on to two lines do not press RETURN at the break in the line. Your lines on screen should break in exactly the same place as they do in the mag.**
- **The dots you see in some lines (like the one between well and done in PRINT"Well·done") indicate spaces. The dots are there so that you don't have to guess how many spaces to put in when there are more than one.**

TypeChecker

This program lets you to check whether you've typed *AA* listings in correctly. Type it in, then SAVE it for future use. When you want to double check that you typed a listing in correctly:

- **Load up *TypeChecker*.**
- **Type NEW.**
- **Type in the listing of your choice.**
- **When you've finished type LIST.**
- **At the end of every line a highlighted code will appear. It should correspond with the code printed in front of the same line in *AA*. If it doesn't you have typed in that line incorrectly.**

```
PAML 10·'·TypeChecker·V1.0·-·By·Simon·Forrest
     er·-·Dec·1992
MAOJ 20·'·For·Amstrad·Action·-·Public·Domain
DANK 30·MEMORY·&9FFF
CAJK 40·csum=0
GAME 50·FOR·addr=&A000·TO·&A05B
DAKJ 60·READ·byte$
GAJB 70·byte=VAL("&"+byte$)
FACF 80·POKE·addr,byte
GAFB 90·csum=csum+byte
DALK 100·NEXT·addr
OACI 110·IF·csum<>&2ADD·THEN·PRINT·"Checksum·
     Error":END
LAHE 115·POKE·&A001,PEEK·(&BB5B):POKE·&A002,P
     EEK·(&BB5C)
KAHI 120·POKE·&BB5A,&C3:POKE·&BB5B,&3:POKE·&B
     B5C,&A0
MACN 130·PRINT·"TypeChecker·V1.0·Installed":E
     ND
MABC 140·DATA·CF,FE,93,FE,0A,CA,00,A0,F5,C5,D
     5,E5,FE,0D,CA,22
LACJ 150·DATA·A0,5F,16,00,2A,5A,A0,19,22,5A,A
     0,E1,D1,C1,F1,C3
LAFJ 160·DATA·00,A0,3E,20,CD,00,A0,3E,18,CD,0
     0,A0,2A,5A,A0,7C
LADI 170·DATA·CD,45,A0,7D,CD,45,A0,3E,18,CD,0
     0,A0,21,00,00,22
LACN 180·DATA·5A,A0,C3,1B,A0,F5,E6,0F,C6,41,C
     D,00,A0,F1,E6,F0
KAJC 190·DATA·1F,1F,1F,1F,C6,41,CD,00,A0,C9,0
     0,00,END
```

Turning *TypeChecker* off (it is automatically initialised when you RUN the program above) and back on again is quite simple:

```
POKE &BB5B,0      To turn it off
POKE &BB5B,3      To turn it back on again
```

Isn't science amazing? (Now don't argue.)

Reader ads

Buying? Selling? Got a service to offer? Want to sell your sister to white slave...? (*let's get on with the ads, okay – Dave*)

SERVICES

Colourful platform game with 50 levels. Only £2. Price includes tape, p&p, reliable loading system, tape-to-disc routine and 183k free PD. Cheques to Gary Smethers, 13 Meadow Close, Cononley, BD20 8LZ.
PD software required for new PD library. British and foreign PD welcome. Disks returned ASAP. Send to Caledonian PD, c/o R. McLaren, 67/8 Duke St., Edinburgh, EH6 8HN. Tel: 031 555 4061
AA Type-Ins Disk. 350+k. Includes many out of print. Send 3-inch disk and 50p (return postage paid by me) to Richard Mackey, 54 Lankton Close, Beckenham, Kent, BR3 2DZ. Bard's Tale help also given.

USER GROUPS

Bulletin Board – I have a need for advice on settting up a BB for CPC users. What, where, when, how can I do it? Ring Chris on 091 4771714.

WANTED

Amstrad CPC6128. Must be in v.g.c. with manual. Devon area only. Tel: 0395 273143
AA59 and a copy of Incentive's game Dark Side wanted. G.A.Thornton, 66 Bracken Court, Ushaw Moor, Durham, DH7 7NF.
Printer wanted for CPC464 plus. Will pay up to £100. Brian Devlin, 14 Lisnastraine Park, Coalisland, Co. Tyrone, Northern Ireland, BT71 4PW.
Green screen monitor for 6128 wanted. Also 3-inch discs. Urgent. Tel: 0249 660997
PD contacts for swapping PD. Already three of us. Tad PD, RSPD (me) and Tom Dean of the disczine Impact. For more details or a catalogue phone Robert at 081 575 2979 for the address.
Manual for 6128. Urgent. Ring 0249 660997 any time.
Starquake, Revolution, Fluff. Any format. Humungous pile of discs and tapes for swapping or sale. Many Mastergames/Raves. Utilities also. Tel Tim: 0533 628272
Contacts to swap games, utilities, hints, cheats, tips. I live for my Amstrad 6128 so letters will be only about computing and not much else. Interested? Drop me a line or phone me. Steven P Hyde, Flat 3/13 St Mary's Road, Leamington Spa, Warks. 0926 885158.
Tapes, poker games, Surviver and Subter Stricker Street Fighter Two. Mr A.N.Body 42A Penney Av., Mt. Roskill, Auckland, New Zealand. (*This one has to be a joke – Keith*)
F16 wanted on disc. Will pay up to £10. Send offers to Ian Simpson, 88 Benview Park, Belfast, BT14 8HU.
Douglas Green, Australia – help! Or has anybody got his address or phone number? I want codes to configure PAF for the CPC6128. 081 220 1469. Ian Whaley, 122 Landsdowne Road, Ilford, Essex. Will sort costs.
Amstrad CPC6128, colour monitor, datacorder, joystick, mouse, plus many games, utilities, ROM board with RODOS, manuals and books. £200. Tel 0438 814473 (Herts). Will consider splitting. Also DMP2000 £70.
Wanted: Laser Basic on tape or disc for CPC6128. Also Laser Compiler on tape or disc for 6128. Telephone anytime. 0533 546729.
Wanted: CPC464 instruction manual. State your own price. Phone 0308 424738 after 6.30pm. Ask for Peter.
Wanted urgently: any of the following printers – Epson RX80, FX80, LX80, Canon PW1080, BJ80, Kaga KP810, Amstrad DMP2000, Mannesmann Tally MT80. Write to Rizwan, 373 Rotton Park Road, Edgbaston, Birmingham B16 0LB.
Skate Wars and R-Type or Rick Dangerous 2 and Heroquest (all disc). Swap for Indy 4 Fate of Atlantis and Addams Family. K. Scanlon, Carrigans Lower, Ballymote, Co. Sligo, Ireland.
FD-1 disc drive for 6128. Also S-DOS ROM by STS. Phone Brian on 0932 862445.
I want a CPC6128 keyboard to connect to the CTM 644 colour monitor. Spencer Wilson, El Shaddai Mountain West, Derrydonnell, Oranmore, Co Galway, Ireland. Tel 091 90390.
Tapes, poker games, Surviver and Subter Stricker Street Fighter Two. Mr A.N.Body 42A Penney Av., Mt. Roskill, Auckland, New Zealand. (*This one has to be a joke – Keith*)
Lords of Chaos, Rebelstar 1&2, Emlyn Hughes. Tape only please. Will buy or swap for newer titles. Contact Stephen Stewart, 185 Burnbrae St., Balornock, Glasgow G21 4LB.
Urgently wanted: public domain software for new PD library. Cassettes only (you'll be popular – Dave). All cassettes returned as soon as possible. SEnd cassettes to 8 Tymonville Grove, Tallaght, Dublin 24.

MAKE YOUR AD STAND OUT

There's loads of text for a reader to wade through on these Reader Ad pages, so you really need to catch their attention if you want them to buy your bargains. Here are a few tips to get those browsers hooked:

- Dare to be different! Witty or weird ads are bound to make their mark, but make sure it's clear what you're selling or what you want.
- Try to find some way in which your CPC6128 with colour monitor is a better barg than Joe Blogg's CPC6128 with colour monitor, and emphasise the fact in your ad.
- Write clearly – often we get ads in such bad handwriting we can't translate the addresses or telephone numbers – we tend not to print these.
- Make use of the fact that we make the first few words of each ad bold. Don't start your ad "For sale' or 'Wanted' – wade straight in telling them what you've got for sale.
- Also, make sure your ads make sense grammatically. Get someone else to read it to make sure they can understand what you're on about.
- Alternatively, you could just send us a cheque for £5, made payable to Future Publishing, and we'll stick your ad in a box like this one.

Buying goods through the post

There are loads of great bargains to be found in this Reader Ads section and the other adverts scattered through the magazine. But some of you might understandably be a bit reticent about sending money through the post for goods you haven't seen to somebody you've only talked to over the phone. But don't panic. Just follow our simple guide to buying goods by post to minimise any risks.

✉ Before ordering anything try to contact by phone to the person or company advertising the goods you want. Write down a list of questions you want to ask them – clarify the price, who will pay for delivery, compatibility, etc.

✉ Confirm a delivery date – ask how long you can expect to wait before the goods will be delivered (with official companies it should be within 28 days).

✉ Never send cash through the post. If possible use a credit card because it will probably give you some form of insurance. Failing that use a cheque or PO.

✉ Keep records of all correspondence and phone conversations with the people you're ordering stuff from.

✉ If a problem does occur, the first place to contact is the person or company you're ordering the goods from. Be calm and explain the problem clearly. Most faults are just mix-ups and can be sorted out.

✉ If, however, you continue to have problems write to us here at Advertising Complaints, *Amstrad*

FOR SALE

Tape games. Over 80. Many top games. Excellent prices. For full list sens SAE to: Daniel Holbrook, 161 Poulton Royd DRive, Spital, Wirral, L63 9YD.
Amstrad Action collection for sale. Issues 1-103 including all 37 boxed covertapes and nine early covertapes. All in excellent condition. Offers? Buyer collects or pays postage. Tel Richard 0326 280822.
Amstrad CPC6128 with colour monitor, £128. Also many add-ons and games like Lemmings and a Multiface 2. Phone for list. Also AAs 65-105. Nearly all in vgc. Tel 0206 868634.
CPC464, keyboard, and DDI-1 disc drive, Super Pro Zip-stick, Mastercalc, and Tasword 464, plus Batman, Indiana Jones and the Last Crusade games (on disc) £40. Phone James Reerie 0743 366172.
Wide range of games (tape) for sale or swap. List includes Switchblade and Max Pack. Phone 0960 361496 for list (Northern Ireland).
Amstrad 6128, with colour monitor, over 60 games, Laser Gun, plus educational software, utilities, Headline and Brunword for word processing. Perfect working order, £130ono. Hastings 0424 440527.
Amstrad CPC464, green screen monitor, over 70 games, manual, joystick, all for only £130ono. Tel Alan about 6pm on Mondays or Fridays on 0271 76433.
Disk games for sale: Turrican and Powerdrift boxed and in good condition. Will sell both together for £6. Telephone 0264 365895 after 6.30pm.
Amstrad disk drive: DDI-1 disk drive with interface and manual, £75. Telephone 0698 825045 after 6pm. West Scotland.
Adlan (adventure writing package) with six slot ROMbox, manual and disc £40. Also PAW £10. Contact Iain Quigley, 14 Bute Court, Greenock, Inverclyde, Strathclyde, Scotland PA16 7AG.
Massive £2,500 CPC sale, hardware, discs, cassettes, book. SAE for eight page list. Nick, 3 Petersfield Road, Duxford, Cambridge 0223 574307 after 4.30pm.
64k Rampack for 464 complete with tape and manual, £15. Tel Dave: 0432 275828
Amstrad 6128+ with colour monitor and some games on disc and tape. Good condition. £180 ono. Tel Jane: 0566 776344 (Cornwall)
Disks, tapes and mags for sale. For list send SAE to Alan Archer, 21 Vandyck Avenue, Keynsham, Bristol, BS18 1LE.
Spectrum games, 50 unboxed, for sale. The lot for £10. Tel Derek: 041 773 0398
Amstrad CPC 464 with colour monitor, mags, joystick, over 300 games. Cost £2000, sell £250. Tel: 0908 608991
CPC 6128 with CTM 644 monitor. Hardly used. Brunword, At Last (Database Manager), plus Junior Educational Software X5. Manuals. AA tapes 3,4,5,9-30,32,37,41,43,48. £150. Contact 081-764-1275 after 5pm.
Mags: AAs 75, 81-87 £1.20 each, 88-95 £1.70 each, 96-105 £2.50 each. Good condition, with covertapes. ACU, May '90-May '92, CPC Attack Jun '92-Oct '92. 60p each.Send large SAE to: A. Swinbourne, 11 Vicarage View, Redditch, Worcs., B97 4RF. Tel: (0527) 68419.
CPC 6128 with colour monitor, light pen, light gun, speech T.V. modulator, tape/leads, over 200 games, Pagemaker and Mini Office 2. Good condition, £300 ono. Tel Peter on 031 229 8118 (Edinburgh).
CPC 6128 with colour monitor. Additional disk drive, DMP2000 printer, light pen and joystick. Software includes Wordstar, Mastercalc and OCP Art Studio. Excellent condition. £150 ono. Disk and tape games for sale also. £5 for disks, £2 for tapes. Tel Milton Keynes (0908) 315893 for details.
CPC 464 green screen and keyboard with 95 mags including AA5, around 140 games, manuals and a joystick. All for £120 ono. Charles Aitken, 7 Briar Place, Penpont, Thornhill, DG3 4BX, Scotland.
13 Amazing games: APB, Simpsons, Barbarian, Batman TCC, Trapdoor, Impossible Mission and loads more! £20. Also Funschool 1 8-12, FS3 and FS4. £25. Tel: (0222) 628208 and ask for Caroline.
CPC 6128 colour, printer, mags (AA16

Continued on page 32 ➤

Further reading

Read all about it! Read all about it! David Crookes puts on hi rerading glasses and settle by the fire to plough through this month's literary offerings from the 'zine scene.

But first, the headlines...

- *CPC Undercover* has closed down after six issues because of the immense amount of time it takes to write and run it. The editor, yours truly, wishes to thank everybody who bought it.
- *WACCI* (7 Brunswood Green, Hawarden, Deeside, Clwyd CH5 3JA) is issuing a 20-page catalogue listing all of its services in depth to all its members. Paul Dwerryhouse, *WACCI*'s treasurer, has told *AA* that updates will be issued every six months. *WACCI* has also knocked up an impressive database listing of the entire contents of every *WACCI* magazine ever published. It must be pretty hectic at *WACCI* HQ at the moment.
- Tim Blackbond's fanzine, *Artificial Intelligence* (19 Lee Street, Liversedge, West Yorkshire WF15 6DZ) is apparently set for a relaunch. If it remains as good as it was before it closed last time, then it'll retake it's position at the top of the 'must-read' chart.







As *CPC Undercover* closes *AI* looks like making a come-back...

Amstrad User 5

Price: £1.15 plus disc plus SAE (state 128k or 64k when ordering)
Editor: Brian Leahy
Address: St Mary's Road, Kingscourt, Co Cavern, Ireland

There's a commonly held belief in the CPC world that any disczine that doesn't come from France or Germany must be rubbish. Richard Fairhurst is busy trying to prove this to be spectacularly wrong with the his forthcoming fanzine *Better Than Life*, but there is already one disczine around which goes some way to proving CPCers west of Dover can produce the goods – *Amstrad User*.

It doesn't have all of the fancy effects that the continental disczines have. There's no left-to-right scrolling or raster bars in the background (so you can actually read the text – hurrah, major scientific breakthrough). Instead there's just kilobyte after kilobyte of exceptionally well-written text.



Amstrad User – low on the glitz factor.

That's not to say that the design is hopeless. While the first impression of the mag is disappointing – especially the rotten use of clip art – the style gets increasingly, well, stylish from there on in. It has an impressive 'film credit' sequence, clever screen clearing methods and an attractive menu screen. But it has to be said, even though it looks good, it won't blow your mind. Its sheer user-friendliness might, though.

The menu screen shows a list of the nine sections of the 'zine which include the editorial, PD news, game reviews, a feature and lots of extra bits and bobs. Selecting one of the options loads up a long list of word processed text which you can move up and down to read at your leisure. I like the idea of loading all the text in one section in one go because it cuts down on the disk accessing time.



The best thing of all, though, is that everything is well-written in a clear and often humorous way. Some of the articles are a bit weird, like the feature which gives intricate details on why, in fact, the CPC is a living beast. Some articles are just irrelevant – why have SNES coverage in a CPC zine? But the immense array of information and entertainment balances out to a great extent.

The B side of the disc contains six PD games, *The Smiley Affair* being one of the better ones. Having a 'coverdisc' certainly adds a few per cent onto the final mark, because it represents a better deal. Indeed, as a package, *Amstrad User* issue five is a belter.

Contents	**86%**
Appearance	**71%**
Overall	**75%**

Impact 3

Price: Free
Editor: Tom Dean
Address: 53 High Lane, Burslem, Stoke-on-Trent, Staffordshire ST6 7OF

One word sums up the latest issue of *Impact*: odd. In fact, make that ODD, with capitals and everything. What else could you call a disczine which, among its reviews, news and tutorials has a section devoted to short stories of a totally vacuous nature with no meaning whatsoever?

In terms of design, *Impact* just doesn't live up its name (you knew there had to be a reference like that somewhere in this review). The artwork is quite crudely drawn and not all that attractive. Basically, what I'm saying here is that visually it's not going to make you gasp in astonishment. Snore, maybe.



This! Zine! Loves! Exclamation! Marks!

So more attention has been put into the text side of things, right? Wrong! Putting the short stories and the poems aside, and ignoring the credits, Ninja film reviews, a DIY *Goodies* movie script (oh, very topical), self-publicity, predictions and personality quizzes, there is hardly anything to make it essential CPC reading. In fact, there isn't a lot of CPC coverage in the first place. There are some lengthy reviews, but everything else is a bit brief. A pity, because the text is intelligently written, and in a better fanzine would probably find an appreciative readership.

But *Impact* is free, and so, in that sense, it is worth taking a look at since there's no financial risk, but don't expect too much, because you'll be seriously disappointed.



Yikes – I'm scared!

Content	**40%**
Appearance	**65%**
Overall	**55%**

Are you after some cheap thrills? Keith Woods is and he knows where to get them – the public domain...

Public Image

Octwaver

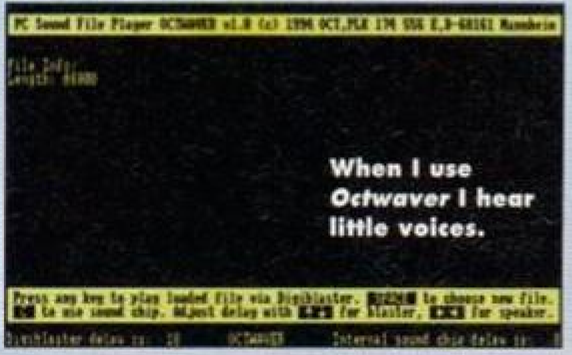
By OCT

Octwaver is a rather nifty little program for playing PC sounds on your humble CPC. It's a bit like *Digitracker*, which was reviewed in *AA100*, only instead of transferring music modules from the Amiga, this program transfers high quality sound files from the PC.

Octwaver is very simple to use. All you have to do is to load your PC sound samples into the program, then it does the rest. Both binary files and ASCII files can be used, although a major drawback is that files that don't fit into the normal CPC RAM cause a crash – the program makes no use of the 6128's second 64k.

The 8-bit samples of the PC are, of course, reduced to 4-bit samples when used through the CPC's internal speaker, which does sometimes result in a slight loss of quality. Even so, the results are absolutely outstanding. They are certainly light years ahead of the 1-bit samples produced by the tape samplers we're used to (which are, in comparison, nothing but a load of noise).

Octwaver is a shareware program and you'd be well advised to pay the tiny sum of £3 as many benefits will be bestowed upon such honest people. Not least of these is the author's offer to give free PC sound and conversion tools to registered users. Many samples contain control characters which can cause considerable problems when used in AmsDOS. By using the pre-processor under MSDOS PC such problems are avoided. For true sound fanatics it's also possible to purchase a gadget called a *Digiblaster* for only £15, which allows you to play incredible 8-bit sound samples on your CPC.



When I use *Octwaver* I hear little voices.

The really useful thing about all this is that it's very easy to play the samples in your own programs, using any delay (change in the sample's speed) you want. As well as the full English instructions, an example program is included to show you how to do this.

Octwaver is probably the best new utility to be released this year. You really will not be able to believe that these high quality sounds are

Zupple vs Puzzle

Zupple by Stephane Levassort
Puzzle by Quetzalcoatl and Kukulcan

Does anyone remember the game *Split Personalities* (I wouldn't blame you if you didn't)? You know, the one in which some badly-drawn face was split up into loads of different squares which were then shuffled about, and you had to put the ugly mug back together again.

Zupple is the PD version with knobs on. You've got eight facetious faces and their accompanying names to reconstitute, each of which has been split into 20 pieces. Starting with a blank screen, you move your cursor over a grey square and hit fire to reveal the first four pieces.

Once you've got a decent amount of pieces you can start pushing them around and matching them up. You do this by moving your cursor over one of the pieces, pressing fire and indicating the direction you want to move it in. The piece then goes hurtling off in that direction and doesn't stop until it hits something solid.

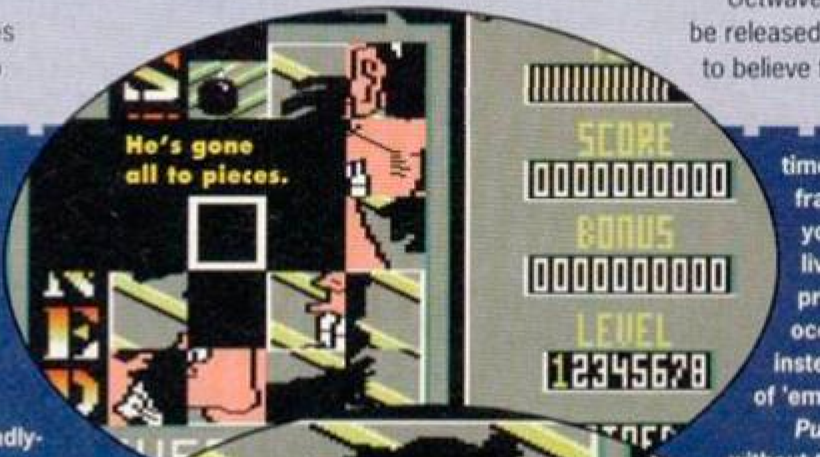
That sounds easy, doesn't it? A 20-piece jigsaw? You'll have that done in no time at all. Well, no time is about what you get, because the real difficulty lies in the particularly tight time limit. If your face is still fragmented by the time it runs out, you lose one of only two precious lives. Another life-threatening problem are the bombs which occasionally appear on the screen instead of pieces – you need to get rid of 'em quick before they explode.

Puzzle is the same sort of game, but without the complications. All 15 pieces are always present on screen, so can only move one square at a time. It also means you don't have to worry about bombs dropping in.

Instead of a time limit, *Puzzle* restricts the number of moves you can make, starting with 999 for the first level and dropping to 17 for the eleventh and last level.

The graphics are much better than *Zupple*'s. The quality of the pictures prove a healthy incentive for getting you to put them back together again, just to see what they look like complete.

So, which one grabs the honours? *Zupple* is fun for a while, but the tight time limit makes it far too difficult to progress. *Puzzle*, however, features passwords for each level so that you can restart at that level immediately, which makes it the better of two pretty unexciting games.



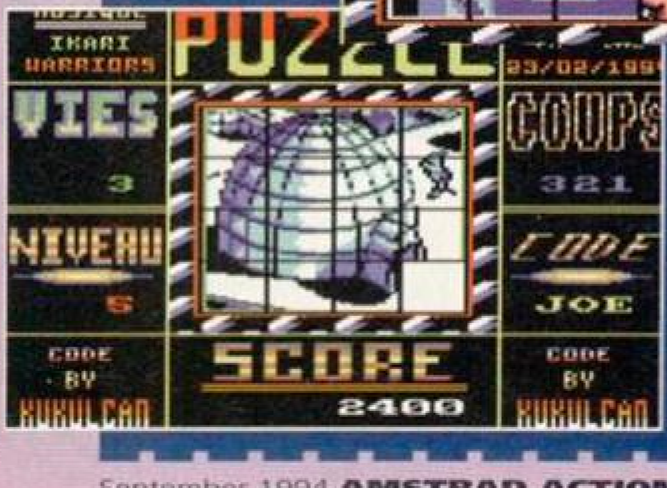
He's gone all to pieces.



He looks tough, but is easily fixed.



Er, I'm not sure I want to piece this one together...



Haven't we seen this igloo somewhere before? Oh yes, it's from Za....



Nearly finished.

ZUPPLE	PUZZLE
74%	65%



being exuded by your humble CPC. The author has promised some exciting new updates if enough people pay the shareware fee. For only £3 they'd be advised to.

90%

NutWorks

You may have been hearing a lot recently about something called the 'Internet', a cyberspace the media suddenly discovered sometime last year when it started to become fascinated by what it loves to call the, 'digital highway'.

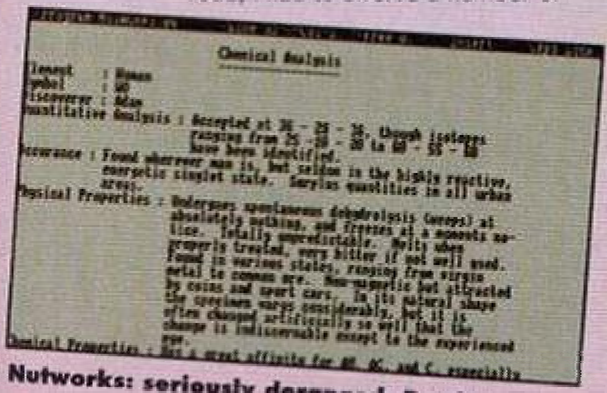
However, Internet is something that existed long before the media ever noticed it, and one of the more ridiculous digital magazines it produced has found its way into CPC PD. Dating from 1985, *Nutworks*, the 'Internet Virtual Magazine for those who think that reality is something to be avoided' (*someone's been reading too much Douglas Adams – Dave*), is an all-American magazine in the form of ASCII files that can be easily loaded into any word processor with decent memory space (the longest issue is 40k).

The 'zine consists of essays, jokes, poems and articles which take a look at the lighter side of life. As it was distributed between full-time computer nuts, *Nutworks* inevitably features some in-jokes which only computer studies graduates will properly understand, and a few mind-numbingly boring debates between technical freaks (the one about the reasons behind a misspelling on a Burger King receipt is a case in point).

For the most part, however, *Nutworks* is hilariously funny. One of the best articles features a list of 22 statements from insurance forms where car drivers try to summarise accident details in as few words as possible. "The guy was all over the road, I had to swerve a number of times before I hit him," is one of the best. Other highlights includes the uncharacteristically clean multiple-choice sex quiz, Mr. Spock's rather convoluted proverbs and deep philosophical theories such as, "Time exists so that everything doesn't happen at once".

Be warned – *Nutworks* is not for those of a sensitive disposition. One or two of the jokes are in the worst possible taste and it's far from politically correct, describing itself as an, 'equal opportunities offender'. If this doesn't bother you though, *Nutworks* provides eight issues of near continuous laughter for the paltry price of about 50p.

84%



Nutworks: seriously deranged. But fun.

WHERE TO GO

So where will you find all this lovely, cheap, software? Er, page 32 would be your best place to start because there you'll find the Amscene Directory, which contains a list of all the main PD libraries. Most of them should have this software. If they haven't, tell 'em we told you to tell 'em how rubbish they are.

Don't forget to pay the fee..or else!

Space Taxi

By Elmar Krieger

"Ere guvnor, you'll never guess who I had in me cab the other day – only that bloke wot wrote *Super Cauldron* and *Prehistorik 2* for the CPC. You know, the Austrian one. An' ya know what he tells me? You'll never guess – but it turns out he's written a taxi game.

"'I've been a cabby all me life, me,' I said to 'im. 'I should be good at that, where can I get it?'

"'Oh, eet eez jetzt PD,' he says.

"'Cor blimey, strewth,' I thought, 'I'll get me mitts on that straight away.'

"It wasn't half like I'd expected, though, guvnor. You see, bein' in space 'an all, the taxi doesn't bother much with wheels. Sort of flies around, instead. You've gotta direct it with a little booster rocket, sorta like in that old game *Thrust*.

"Well anyway, every level contains a few platform things, each with a number. Before you know where you are a little blokey arrives on one of these platform things an' starts wavin' his hands about like a madman who thinks his hands are on fire an' screamin', 'Hey Taxi!'.

"You've gotta land as carefully as you can on this fella's platform to pick him up. If you miss the platform, hit it too quickly or hit your customer, well, your cab just goes to pieces like, and you lose one of yer three lives.

"That was a terrible shock for me guvnor, but not like the one when I managed to pick him up. He asks you to bring him to another platform, and the meter starts going down! Yes, down instead of up. The fare starts at $100, but if you're too slow, he'll pay you nothin' at all. An' you need all the money you can get to buy more fuel.

"You get a few of these fellas to transport before one finally tells you to bring him to the next level through a door at the top of the screen. Each level is a little more difficult than the last, and some have interesting twists, such as the one where the platforms grow out of a tree. There's not much sound to be talkin' of, guv, but the graphics are nice'n'cheerful like, an' the animation's lovely'n'smooth.

"I had some fun playin' this game, guvnor, it 'as to be said. It's tricky to get the hang of at the start, but once you do you'll realise how good it is. The only bad thing as far as I can see is that there are only eight levels, but hey, you can't have everything can ya?

"Now guv, where is it you said you were goin'? Guvnor...?"

84%



A cab with legs? It must be Japanese.



Aargh... the car's on fire! Or is it a booster rocket?



Terrible the price of fuel these days.



Watch that tree grow!

Next Month

What happened to the PD's most difficult game, as promised last month? Erm, owing to some minor technical difficulties it's being held over until next issue, so hungry gamers eager for a challenge will just have to wait. If they're lucky we might also review *Battlespheres*, a new game from the man that brought us *The Smiley Affair*... if he finishes it on time. Techy freax won't be forgotten, though – they can look forward to a review of Marco Vieth's exciting new CPC emulator for the PC, which claims to run just about everything bar demos. Can it be true? You'll just have to wait and see...

The Examiner

With a mighty roar of thunder and a flash of lightning that could be seen in four continents the great god Editor did decree that Debby Howard should once again go forth and produce two pages of adventuring news and reviews every month...

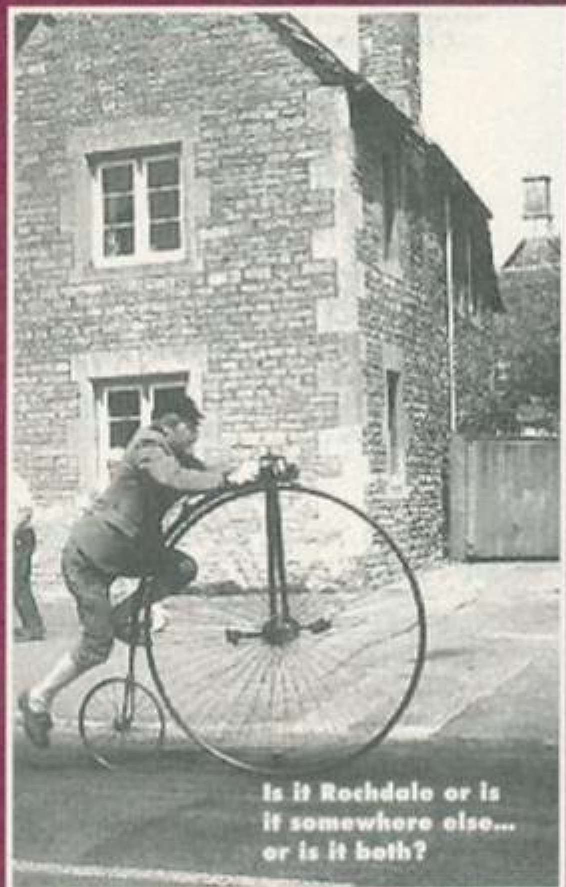
ARNOLD GOES TO SOMEWHERE ELSE

Second adventure in a set of five

REVIEW

Price: Tape: £2 (£8 for all five Arnold adventures on one disc – you can only buy the full set of adventures on disc)
Distributor: WoW Software, 78 Radipole Lane, Dorset, DT4 9RS. Cheques/Postal Orders payable to: JG Pancott

As the title suggests you play the role of Arnold Blackwood, a private detective of sorts, who works for Lord Erebus (or, as he is fondly referred to, Lord E). It seems that Lady E has run off with an occultist from Essex. Your task is to find her and also Lord E's deaf aid, tablets and amulet.



Is it Rochdale or is it somewhere else... or is it both?

The only advice that Lord E gives you is that you should start looking for her near the entrance to the Stygian Shores (*is that just along from Southend? – Dave*). You also will need the help of a dragon before you attempt to cross the river Styx.

Like the other Arnold adventures *Somewhere Else* has been written in BASIC. There are some great sound effects, especially the one when you bury the dragon (it might not be quite what you expect). I'd suggest you check your volume level to make sure that you don't miss out on all the fun.

If you enjoy Simon Avery adventures you'll love the Arnold adventures, because they're similar in humour. One good feature of the games is that they print on screen your last 20 or so exit movements, which is dead handy for keeping yourself orientated (especially if you're one of those people who are too lazy to map).

Arnold Goes Somewhere Else is based on mythological characters and places like 'The Study Of The Sender Of Pestilence'. You will enjoy meeting such objects/characters as the Magic Mushroom and a Very Fat Goat but you don't need a vast knowledge of mythology to enjoy the game and complete the adventure. I would highly recommend all the Arnold adventures, and they're great for beginners.

The only drawback that I found was that "use (object)" seemed to be the solution to most of the problems – a little more imagination might have helped here. But since these adventures are all re-released versions, and still enjoyable, I suppose the author, Colin Harris, can be forgiven (I'm feeling generous).

82%

THE WISE AND FOOL OF ARNOLD BLACKWOOD

Third adventure in set of five

REVIEW

Price: Tape: £2 (£8 for all five Arnold adventures on one disc – you can only buy the full set of adventures on disc)
Distributor: WoW Software, 78 Radipole Lane, Dorset, DT4 9RS. Cheques/Postal Orders payable to: JG Pancott

Based in and around Rochdale (a Rochdale, however, which seems to exist in an alternative dimension – I wonder if the number 38 bus ever arrives on time in this version of reality?), *The Wise And Fool of Arnold Blackwood* tells a tale which starts with Arnie going to the local Wimpy Bar to meet his boss, Lord Erebus. Once you've found him, he'll tell you what the real point of this adventure is – but trying to get the info out of him is a task in itself, so I won't go giving it all away here.

Like with *Arnold Goes Somewhere Else*, make sure that you have the volume level high enough so that you can hear the special sound effects which Colin Harris has included. The train journey and the Pepsi swilling are worth listening out for.

Lords & Ladies of Adventure

The adventuring aristocracy are a benign and benevolent lot. They may have solved the secrets of the toughest adventures known to man, beast or Jeremy Beadle, but they don't want to keep that knowledge to themselves; they want to share it. With you. So if you're stuck on one of the adventures listed below, then just contact the Lord or Lady listed as being an expert on that adventure, and they'll be willing to help you out. Be nice to them and you will be surprised how helpful they can be. If you're writing to them, don't forget to enclose a stamped, self-address envelope otherwise you won't get a reply.

- **Virtually every Amstrad adventure ever – Joan Pancott ☎ 0305 784155**
- **Adult 2, Boredom, Can I Cheat Death?, Doomlords 1-3, Dungeon, Escape, Firestone, Jason and The Argonauts, River, Spacy, Tizpan, Welladay. – Stuart Mainland, 2 Douglas Road, Coyton, Ayr, KA6 6JJ.**
- **Avon, Forest At World's End, Hollywood Hi-Jinx, Kobashi Naru, Mordon's Quest, Scapeghost – Angela Allum, 22 Point Royal, Bracknell, RG12 7HW.**
- **Knightmare, Kobyashi Naru, Rebel Planet, Who's Afraid Of The Balrog? – Ross Younger, 3 Cammo Parkway, Edinburgh EH4 8EP.**

Adventurers' Chronicle

● Superb news for the Amstrad adventure scene this month – the Examiner is back up to two pages. Which means more reviews (at least two a month), and more clues and tips for those difficult adventures you've been stuck on for ages. We even have room for your letters, the latest news and special features. What I need and want from you is tons and tons of mail, I do read ALL your letters but owing to the lack of space previously, I haven't been able to feature many of them!

But now I can, so let me know what you would like to see on these pages ('pages' – ah, doesn't that sound so good?), because they're YOUR adventure pages. So if you would like to see more than two reviews a month or prefer to see more clues/tips or even maps just write and tell me.

And don't forget, if you've finished an adventure, write and ask to be put in the Lords and Ladies of Adventure section so that you can help out your fellow adventurers, as people have been doing since the very beginning of *AA*.

Remember the *Bard's Tale* club and the *GAC* clinic that the Balrog featured before he retired back to his cave? Well, I want ideas from you as to what we could do next! Don't forget that I will also welcome any tips and clues to the adventures you have played.

● The latest buzz going around the adventure scene is about the annual Adventurers Convention which will be held over a weekend in October Birmingham. This is your chance to meet face to face all those famous people you've heard about (*famous? Oh, yes, I thought I saw Joan Pancott featured in Hello! last month – Dave*). I'm planning to go this year, so you might even end up talking to me! We all wear name badges which does help you to know who to avoid... er, look out for.

Awards are given on the Saturday to homegrown software companies and for 'services to the adventure scene'. Plus, all the latest and greatest adventure software will be on sale.

I'll bring you up-to-date on the venue, date and how to apply for a ticket next month.

● Unfortunately the *Red Herring* adventure magazine that I reviewed a couple of months ago, has folded. This was due to low subscription numbers, and will be a sad loss to the adventure scene. The only homegrown adventure magazine now running (and currently celebrating over 100 editions covering eight years) is *Adventure Probe*. But I would be interested in reading any homegrown fanzines that feature adventure columns; if you would like a mention and perhaps a review, send a copy to the Examiner, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

Where to go

If you're looking for new and re-released adventures, then drop these people a line (enclosing an SAE, of course) for their latest stock lists.

- WoW Software, 78 Radipole Lane, Weymouth, Dorset. DT4 9RS.
- Adventure Workshop, 36 Grasemere Road, Royton, Oldham, Lancashire, OL2 6SR.
- Amstrad Adventure Solution Service, 10 Overton Road, Abbey Wood, London, SE2 9SD. (This service is what it says and does not sell adventures).

The sound effects certainly give these games that little bit of extra spark.

On your travels you'll meet such characters as Mexican Pete, who has no qualms about selling his most valued possessions if the price is right. But I hit upon one problem you'd be wise to remember. You'll come across a SUPERMARKET TROLLEY; if you examine it or try to do something else with it, it will only respond to the spelling TROLLY (illiterate authors are generally not a good idea in text adventures; illiterate players can cause problems too).

Apart from that, the only other gripe I had was that the game could have done with an AGAIN key to solve at least one of the puzzle (anyone who's familiar with *PAW* adventures, will know that pressing the A key will repeat your last command, but since the Arnold games are written in BASIC they don't have such features). Also, another handy hint is to be sure to alter your body to fit obstacles that get in the way (*what, like lopping your arms off or something? This sounds intriguing – Dave*).

Like the other Arnold Blackwood adventures, *The Wise and Fool* is well worth the asking price.

80%

If you have written any adventures you would like featured in *AA* please send them to The Examiner, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

CLUEPOT

This month's tips come from Peter Clark of Ipswich. I'll be reviewing some adventures that he's written in futures issues, but until let him prove his adventuring credentials with this little lot...

Jinxter

- You must get and wear the gloves before cutting the fence with the secateurs.
- Use the Pelican Charm from the bakery to bring the fire engine and the unicorn to life on the carrousel.
- Enter the clock maker's by knocking on the door (logical, really).
- Throw an object at the oil lamp to set fire to the shop.



Not quite the Avon the author had in mind.

Avon

- If you are put in jail a second time, you get a tone deaf jailer.
- In June, find the skull before going to see the witches.
- While wearing the ass's head, do something that asses do.
- Kiss the statue of the woman in the Chamber with the white pillars.

Ballyhoo

- To collect the helium balloon, get the pole from under the white caravan then go up the rope in the ring. Balance pole then go east.
- To find the ticket for Midway, wait until you have overheard the conversation between Rimshaw and the detective then go back to the ring, look under the Bleachers and examine the junk.

Forest At World's End

- Blow your horn on the brink of the precipice to summon the dragon who will carry you to the bottom of the cliff.
- At the volcano, tie the rope to the rock and climb down.
- Wear the ring to enter the witch's hovel to retrieve the key.
- At the rock wall, touch the rock before going east.
- And that's yer lot for this month, because the column's just about to be eaten by a dragon... yikes.



"I hate it when people grab my tail."

Cheat mode

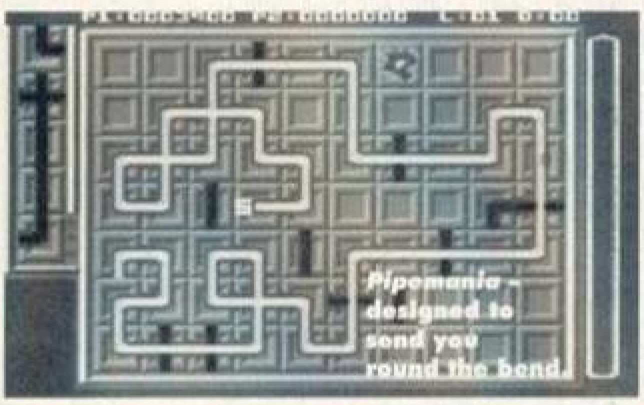


The man with the deadly foot odour.

So you like cheating, but typing in listings is just too much like hard work, yeah? Okay, just for you, here's a Cheat Mode special – absolutely no listings guaranteed...

PIPEMANIA

Plumbing the depth of despair with *Pipemania*? If central heating systems fill you with fear then here are the passwords which will raise the level of play and help you keep your head above water – or should that be gunge? FINE, NEWS, FAIL, SAIL, ERIC, TAPE, SLOW and ACHE.



Pipemania – designed to send you round the bend.

STRIDER

If you aren't taking big enough strides into this game (these jokes are getting worse – Dave) press Z and 0 (zero) on the title screen. The border should flash. Then, while playing the game, press H to pause, and then SHIFT and 1 will advance you to the next stage (but don't try skipping the end-of-level guardian because the game will crash). SHIFT and 0 will restart the level you're on. Each time you use the cheat your lives and time are reset.

THE REAL GHOSTBUSTERS

Who ya gonna call? Cheat Mode! Press the keys C H E A T (original or what?) at any time during play and you will advance to the next level and gain infinite lives.

RENEGADE 3

If you can't be bothered to fight your way through all those levels, why did you buy the game? Er, well, anyway, here's the solution for jumping between levels. When you get to the first menu, press Q and T together (do it a few times to make sure) and then start the game. Once the level is loaded press Q and T simultaneously again and you go to the next level.

X-OUT

To get as much money as you like simply go through go to get a ship, but instead of buying it, give it to Melob (bottom right of the select screen) – your score will increase each time you do so. Having done this a few times, you can buy as much as you like, but keep an eye on the score.

FANTASY WORLD DIZZY

Our moral standards must be dropping – why else would we publish maps for this excellent (I refuse to use the obvious pun) Dizzy adventure in the same issue that it adorns our covertape? We really are making life too easy for you. Especially as we'll be printing the full solution in a couple of issue's time as well. What has happened to the art of actually playing games? I blame it all on the parents. And the teachers. And television. And asteroids crashing into Jupiter...

A GRAND DIZZY

B CROWBAR

C DOOR-KNOCKER

D PICK AXE

E HOLE

F COW

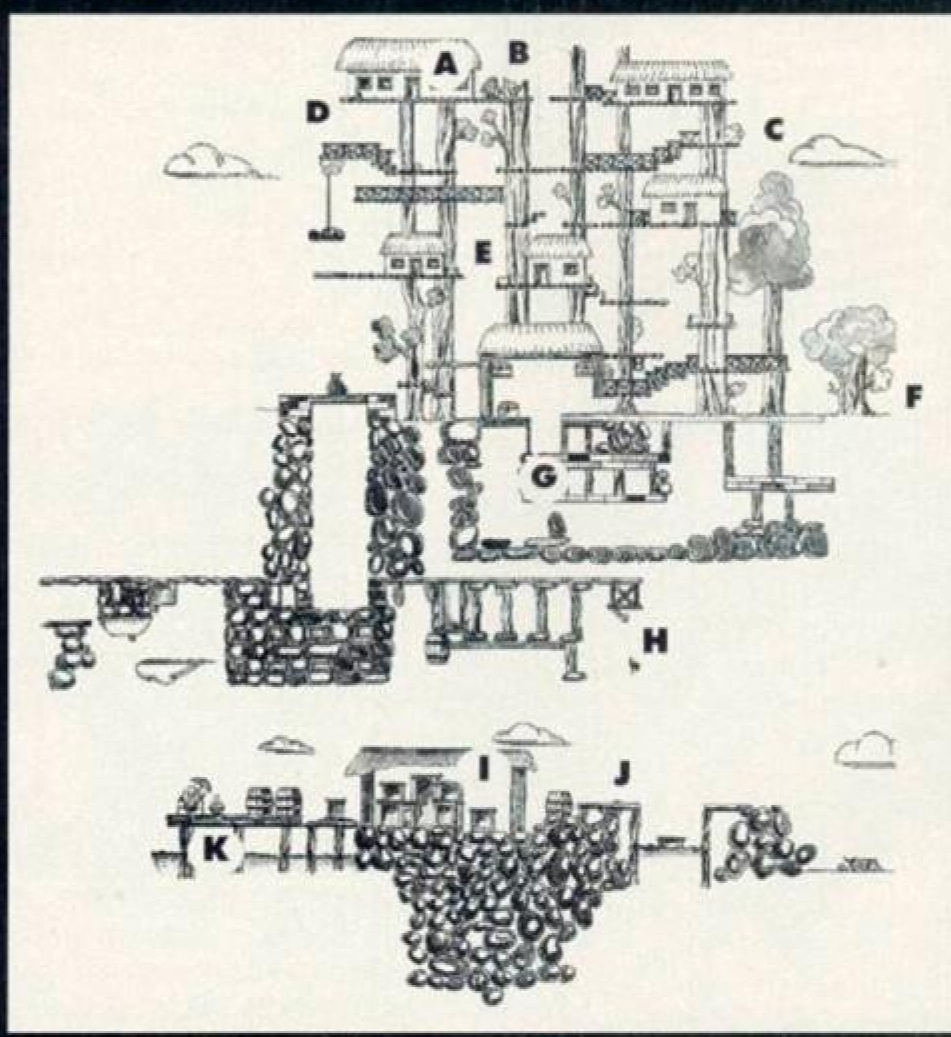
G CARPET

H KEY

I DOZY

J KEY

K POTION



E-MOTION

Type MOONUNIT (was the author a Zappa fan?) on the title screen and then by pressing F you can restart 10 levels further on.

ITALIA 90



Okay, we should be onto USA '94 by now, but for the thousands of you who've got this classic footie sim here's a nifty cheat. If you press function key 6 during play, the ref blows the whistle and you can move straight into a penalty shoot-out.

Gary Linneker from the days when we made it the World Cup.

BLOODWYCH

A cheat for the game we'd love to get on our covertape (we're trying, believe us). Select a two-player game and choose parties for both players. When the game starts get player two's party to drop all their equipment and then kill them. Player one's party can then pick up all the equipment and sell everything that isn't needed.

MYTH

A few tips that should make you a legend in your own, er, bedroom...

Stage 1

Numerous skulls will raise the demon of the fire. Fireball those uglies guarding the orbs. A bedevilled trident will see off the dragon. The dragon holds a key to the last orb.

Stage 2

Examine the statue for firepower. The statue of Perseus will bag you this stage. Run for your life after the doves. Pay your respects at the temple. Sword- and shield-play should get you past the Medusa Get the old bag and she will help you head off the Hydra.



Stage 3

Hack and slash to get some firepower. Examine each container and collect the contents. Read the parchment and quench the flames. The Lady holds the key. Get close and the dragon will see your point. Make a bolt for Odin.

Stage 4

Pay your respects before you go under the arches. Visiting times are very important. The ankh is a symbol of eternal life. There are flaws in the floors, so watch out. Get the Mask of Tut and the Eye of the Pharaoh. Your mummy will tell you to save face. Give the Mask to King Tut when he rises.

Don't put your fingers in electric sockets.

HARD DRIVIN'

Take the stunt track, and when you get to the big bridge drive up to it slowly. When you get to the top slow down until it says 'turn key to start'. You will start to go backwards – look at your score as the points add up.

OPERATION THUNDERBOLT

Enter EFI into the high score table and then, at any time, press the keys J, P and D and you will be transported to a higher level. Which, coincidentally, is not the sort of intelligence you need to play the game.



A BEANSTALK

B DYLAN

C KEY

D EGG

E BUCKET

F BONE

G DENZIL AND ROPE

H BOULDER

I BOULDER

J BOULDER

K JUG OF WATER AND STALE BREAD

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And that's your lot for now. What do you mean, you want to know where all the coins are as well? You can blimmin' well work out where they are yourself (though here's a hint, there are quite a few of them in the clouds and loads of them hidden behind bushes and trees). What more do you want – blood? No, don't answer that.

Anyway, as I said earlier, there'll be a full solution coming along in a couple of months, but until then you're on your own. Go own, give it a try. You never know – you might even like trying to work out the puzzles all on your own.

Oh yeah, and by the way, if you've got any hints or cheats send 'em along to Cheat Mode, *Amstrad Action*, 30 Monmouth Street, Bath, Avon BA1 2BW.

CONT. FROM PAGE 24

onwards), mountain of software and blank disks. All must go. Send SSAE for list or £1200 (*Are you sure you wanted that many noughts Ross? – Keith*) the lot. Ross Younger, 3 Cammo Parkway, Edinburgh, EH4 8EP. Tel: 031 339 2336

CPC 464 keyboard and GT65 monitor with manual. £100 ono. Mr B. Stayt, 7 Dunstall House Flats, Stow Road, Morten-In-Marsh, Glos., GL56 0DR.

CPC 6128 with colour monitor, multiface 2, joystick and 60+ games. Also nearly every AA from 17 to 106 and all AA tapes. £160 ono. J. Davies, 26 Marine Parade, Dovercourt, Harwich, Essex, C012 3RD.

Pascal 80 Hisoft CP/M compiler/editor disc c/w manual. Offers. Ring Alex 0253 353024.

CPC 6128, colour monitor, DMP 2000 printer, Mini Office II, many games, all leads and manuals. Very good condition. £300. Phone Evan Cameron on 0444 414426.

CPC 464, colour monitor, £30. CPC 6128 Rom chip, £15. Dart Electronics light-pen, £15. Many utilities, games, books and mags. For details tel Julian: 081 876 5245.

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6128 keyboard, £35. 464 keyboard £25. MP2 coax, not scart, £25. MP3 TV modulator £25. Cruiser joystick £10. All include carriage. Tel: Brian on Dorset 0747 851029.

Tas-Sign for CPC6128 (disc). Sign/poster making program. As new, £20. F. Russell, 57 Brookside Close, S. Harrow, Middx., HA2 9AW.

3 Game Gear games. Prince of Persia, Columns and Ariel Assault. Bargain at £30 the lot or £10 each. Tel Robert: 081 575 2979.

464+ with monitor and several games. For sale or will swap for Amstrad compatable printer. Mr. T. J. Ridge, 20 Oak Ave., Goole, Humberside, DN14 5UU.

150 Boxed tapes and 30 boxed discs with instructions. 40 unboxed tapes without instructions. All originals, all different (I think!). £100 ono. Also, Brunword Elite Rom Module with 8-bit printer port and font and font editor. Word processor, page layout, database, on-line spell checker etc. Was £125, now only £50. Tel: Mr. Lee on 0487 814043 evenings.

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Tapes: including Lemmings, 3D Construction Kit, from 50p. Cartridges £5 each. Lightgun plus 10 games £5. Andrew Wilson, 17 Pavilion Road, Arnold, Nottinghamshire NG5 8NL. Telephone 0602 202877.

OTHERS

Three weeks in Paradise by Microgen. What do I do with the blunt axe? (Why not ask Debby? See p.28 - Keith) Phone Michael on 081 994 8924.

I will swap Rick Dangerous 2, Football Manager 3 and Arkanoid (all cassette) for any good full-price game (on disc). Offers to: S. Rich, 7 Stewart Road, Harpenden, Herts, AL5 4QE.

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Image PD
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PD Fun
✉ **41 Michaelgate, Kirkby Lonsdale, Via Carnforth, Lancs LA6 2BE**
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Sheepsoft
✉ **Paul Fairman, 298c Holto Road, Barry, South Wales, CF6 6NW.**

Sleepwalker PD
✉ **Disk software: Joe Moulding, 9 Meeting House Lane, Balsall Common, Nr Coventry CV7 7FX**

Tape PD
✉ **Paul Sillifant, Lower Dexbeer, Dexbeer, Holsworthy, Devon EX22 7LA.**
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☎ **0663 744863**

The Eliminator
✉ **14 Station Road, Riccall, York, North Yorkshire YO4 6QJ**

CPC User
☎ **0329 234291**
The UAUG's fanzine.

CPC Undercover
✉ **37 Trimingham Drive, Brandlesholme, Bury, Lancashire**
A technically-minded fanzine that's also on the look out for writers.

Ultra Games
✉ **20 Lancaster Terrace, Chester-Le-Street, Co Durham, DH3 3NW**
Cassette-based multi-format fanzine.

User Groups

Amstrad Contact
☎ **0403 753348**
Sussex-based group that also runs a technical helpline for CPC users.

UAUG (United Amstrad User Group)
☎ **0329 234291**
An *AA*-recommended user group.

WACCI
☎ **0602 725108**
They're fab. Give 'em a ring.

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Star Driver

Keith Woods checks out a game that gives a new angle to the racing genre...

If you've been to the arcades in the last year or so you're bound to have noticed a 3D racing game called *Virtua Racing*. As well as the normal view from the cockpit, *VR* features a choice of side and overhead views from which to play.



Drive off into the horizon...

Star Driver is a game with just one choice – overhead. But at least it's not the view you normally get in CPC racing games. You see your car as a bird flying behind might see it.

This might sound weird but it actually works quite well. The road stretches out over the horizon, so you know exactly what's coming up and have time to do something about it.

Ah, you know I said horizon? Well, there is a catch here. Y'see you're not racing on good old planet Earth but rather a series of asteroids. So the horizon isn't that far off. This game is definitely weird.

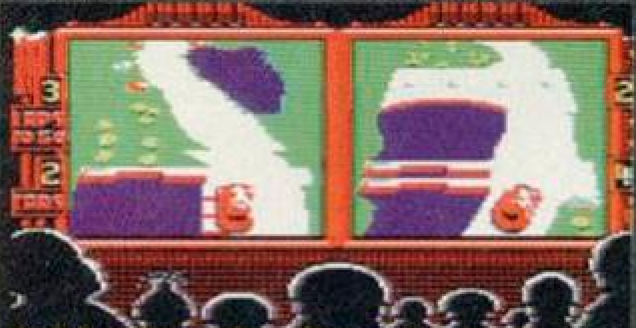
The action moves at quite a pace and the road is only slightly wider than the car. This makes sticking to the tarmac a little tricky, and since you lose a life every time you hit the grass it's not long before you'll be seeing "Game Over" stretched across the screen.

STATISTIX

Game	*Star Driver*
Author	Stephen Lond Baker
Distributor	Radical Software 57 Lebrun Square Kidbrooke London SE3 9NS
Price	£7.95 tape/£9.95 disc

Adding to this difficulty is the tight time limit. Strangely, you don't see it counting down, but only find out if you've exceeded the limit at the end of the level. It's a nasty surprise to discover your game's over when you're congratulating yourself for having reached the end in one piece.

Star Driver has been written by the same chap who turned out last month's *Masters of Space*. The preview version is only a first draft but so far the main game code is looking good, the 3D scrolling is impressive and there's a interesting-looking two-player mode, but the graphics and the design of the roads still need some work. And we're not convinced that losing a life every time you leave the track is a good idea. But with a bit of work on the level design and presentation, the final game should be well worth watching out for. Cross your fingers.



Isn't it embarrassing when you've got an audience watching what you're doing?



Just in case you didn't realise that it was by the same bloke who did *Masters of Space...*

Better Than Life

Could this be the best disczine the UK has ever seen? Or that the world has ever seen, for that matter? Keith Woods sneaks a look at the abridged version...

For years many British CPCers have dismissed most European disczines as little more than fancy demos with a little bit of text thrown in for good luck. Of course the real reason they didn't like them was because they couldn't understand half the articles, but they'd never admit this.

Now, however, a group of Britain's most infamous CPC characters have joined forces to bring us a European-style disczine devoted to the British CPC scene. It incorporates the now defunct magazines *Presto News, Grace Under Pressure* and *CPC Attack*, and also, fascinatingly, *Keith Woods' Fan Club*. Quite what form this will take is anybody's guess, but since just about everything in this disczine is written tongue-in-cheek, it should make interesting reading.

Looking at the list of writers, you can be sure that *Better Than Life* will be witty and irreverent, and contain more than a little controversial opinion, which, going on past fanzine form, will have little basis in reality (who needs facts when you've a crazy imagination?) and can't be taken too seriously. However, lurking in between all the fun you can be sure you'll find some useful CPC info – most of these guys really know their stuff.

The code and presentation of the disczine, written by Techy Forum's Richard Fairhurst, is up to his usual high standards. Sensibly, the majority of the overscan screen is left free for text. Control is simplicity itself, so you're not likely to need to use the instructions which are included.



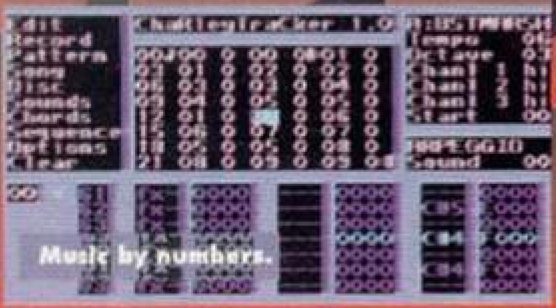
Will the contents match the flashy presentation?

There's one novel feature – a little face that moves in and out of a circle James Bond-style as the disc is loading. It's anybody's guess as to who it's supposed to be...

But will it match up to the quality of the European disczines? *Bad Mag* will certainly take some beating. But it's a pretty sure bet that it'll be streets ahead of any British disczine we've seen.

STATISTIX

Product	*Better Than Life*
Editors	Akira, CRTC, Hangman
Distributor	BTL, 298 Holton Road, Barry, South Glamorgan)
Price	PD (well, almost)



Music by numbers.

The layout should be familiar to anyone who's ever used Soundtrakker...



But this is one lookalike that actually looks like it could improve on the original.



ChaRleyTraCker

If music be the food of love then Robot PD's ChaRleyTraCker is shaping up to be a feast you're going to adore. Keith Woods has a taste of the hors-d'oeuvres...

When the German music utility *Soundtrakker* was released about two years ago it was generally accepted that this was THE music-maker for the CPC. It scored a mighty 93 per cent in *AA92* and since then virtually every tune in every program, including top full-price releases such as *Prehistorik 2*, has been written using *Soundtrakker*.

Never one to accept absolutes, and always one for a challenge, Richard Fairhurst set out to better *Soundtrakker*, and the result, *ChaRleyTraCker*, looks like it may be set to make as many waves as its rival did when it was first released.



I can remember the days when Rolf Harris's Stylophone© was the height of musical technology.

At a a first glance it's almost immediately clear that *ChaRleyTraCker* is not missing any of the features that made *Soundtrakker* so good. The usual editors, sequencers and arpeggios are all there and tunes are created using the method common to all trackers – sticking together a load of numbers in some sort of vaguely sensible order. It's all very familiar stuff and anyone who has used any other tracker won't have any trouble using this one.

But *ChaRleyTraCker* is no mere cut-price, carbon copy of *Sountrakker*. As soon as you put the program to some serious use, you begin to see the differences. Forget differences, make that improvements. First, *ChaRleyTraCker* manages to be even more user-friendly than its predecessors. Thanks to the user-friendly menu and helpful graphics and sensible keys presses it's easy to get to grips with the program without any reference to a manual (as this was a preview version we still haven't seen a manual, but that didn't hinder us one bit). Neither will you need the manual to look for hardware envelopes, because *ChaRleyTraCker* does that for you.

The most strikingly original feature to the program is the sound effects generator. Sound effects can be designed using the same system as is used for normal sounds, and can be dubbed over music, even while it's playing. If used effectively, this function could add a great deal more variety to CPC-generated tunes.

Let's get SERIOUS

From a technical point of view, the most interesting aspect of *ChaRleyTraCker* is that it by-passes the standard CPC firmware and uses its own custom sound generation code. This is particularly useful for anyone who wants to use their sounds in their own productions because most games and demos run with the firmware disabled. It also offers the possibility for sounds without pitch which is ideal for creating more realistic drumming effects. However, anyone writing a program that still uses the standard firmware needn't worry – according to Richard *ChaRleyTraCker* tunes will coexist happily with any program (you can bet Richard will now be inundated with letters to Techy Forum from people who've found programs it won't work with, just to prove you wrong).

One of the most surprising things is that all these extra features don't eat into the memory available for the tunes. *ChaRleyTraCker* uses less memory than any other tracker thanks to its compact code and the fact that its ability to compile up to 10 tunes at once removes the need to have a driver present twice in memory.

But best of all...

The most remarkable feature about this program, however, is the price. Whereas *Soundtrakker* retailed for £25, a price which was considered worthy of such a program and which many people were prepared to pay, Richard is prepared to offer *ChaRleyTraCker* for the ridiculously small sum of only £2.25. This includes the price of the disc, but you will have to pay a few pence extra for the postage (hardly a major hardship).



The best thing about it is the price tag.

This is less than a tenth of the price of *Soundtrakker*, stunning value when you consider *ChaRleyTraCker* has virtually the same features. However, we'll have to wait for the finished version before we can say with certainty whether *Soundtrakker* retains its crown, or if *ChaRleyTraCker*'s the new king. AA

TreNdy TiTleS

"Why on earth does *ChaRleyTraCker* have to have four capital letters?" you may well ask. I mean, we're all used to things like *MicroDesign*, *ProText* and *DonkeyDOS*, but *ChaRleyTraCker*? That's just plain going too far, surely.

CRTC is the name of one of the main chips in your CPC. It's full title is Cathode Ray Tube Controller and, basically, it controls what goes on to your CPC screen. Different CPCs have different CRTCs, so when a demo doesn't work on your machine it usually means that it's a 'bad' CRTC.

But that doesn't explain why it's highlighted in *ChaRleyTraCker*'s title. The real reason is because Richard also uses CRTC as one of his pseudonyms. Quite why is anybody's guess. It's not unusual for chips to have people's names, such as the C64's Sid chip, but the other way round's more than a little odd. Who'd want to be known as Super FX? Or 486SX? Richard...?



Who needs Erasure when you can make electronic widdly-bonk noises yourself?

STATISTIX

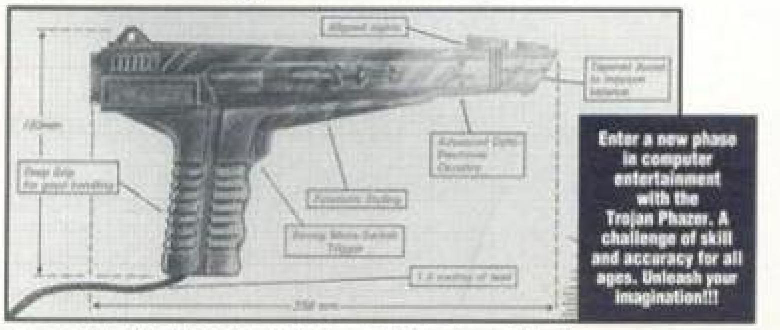
Game	ChaRleyTraCker
Author	Richard Fairhurst
Distributor	Robot PD 2 Trent Road, Oakham, Rutland, LE15 6HF
Price	£2.25

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